THE

# MARYLAND FARMER:

DEVOTED TO

## Agriculture, Horticulture, and Rural Economy.

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### Diversified Production.

In addition to the West River Grange Report, published last month with our comments, we furnish our readers as corroborating our views the Essay, which we find in the March number of that sterling monthly, "*The Southern Farmer and Planter.*" It shows that the planters and farmers are beginning to realize the fact that we must accomodate ourselves to the new order of things and change our system of farming to suit the *present*, abandoning mostly what was adapted to the state of affairs prior to the great struggle between might and right. The system of farming which was perhaps excellent for a thousand acre farm, is not a proper or profitable one for a 100 acre farm.

The excellent views of the writer of this essay are in full accord, in nearly all particulars,—and in the leading features entirely so,—with our views now and expressed lately in a rural paper of Maryland, rehabilitating sentiments we uttered over a quarter a century ago, as will appear from our comments on the West River Grange Report. This essay should be carefully considered by our readers and its suggestions followed as far as circumstances will allow. The main principles we have for years, from time to time, enunciated are concisely stated, and we are happy to find so thoughtful a writer coincides with our views, when perhaps he has never read or heard of their utterances before.

We believe that the soiling system is the only correct system for small farms, and we are sure, as fine, and as many head of good stock of all kinds, unless it be sheep, can be reared, fattened or kept for various purposes, on 100 acres of rich, well managed land as can possibly be done on 1,000 of ordinarily fertile and well managed as a grazing farm. The expenses in the end will be less, as compared with the net profits on the outlay and the improved yearly value of the land.

"ARMSTRONG" PREMIUM ESSAY, BY HENRY T. WILSON, ESQ., ON THE TRUE METHOD OF FARMING ONE HUNDRED ACRES OF LAND IN SOUTHSIDE VIRGINIA ON THE PLAN OF DIVERSIFIED PRODUCTION.

The lands in Southside Virginia are proverbial for being worn out; but as the subsoil is, for the most part, a strong, red clay, they are quite susceptible of improvement. To this end stock-raising and mixed husbandry are essential requisites. The subsoil should be deeply stirred with the subsoil plow, and a *little* turned to the surface at each Fall or Winter plowing. Some of the commercial manures are valuable auxiliaries, but home-made manures must be depended upon to enrich our lands.

Tobacco is the staple of this section, and where its cultivation is abandoned, except under peculiar circumstances, failure has been the result. The best grades always command remunerative prices. Plant no more than can be heavily manured and thoroughly cultivated.

On a farm of one hundred acres there should be about eighty acres of arable land. About five acres of moist loam (not wet) should be sown in timothy for a meadow. Other grasses may be mixed with it to advantage.

Twice as many stock can be kept by the soiling as by the pasturage system of stock-raising, and double the amount of manure made. For this system lay off seven fields of five acres each, convenient to the stock sheds, and cultivate in the following rotation: 1st year—Wheat; fallow the aftergrowth before frost. 2d year—Tobacco, heavily manured; refallow and subsoil as early as possible, and keep the land mellow and clean with the cultivator until planting time; list late in May, and plant as soon as possible twenty thousand hills of tobacco and one thousand cabbage; ashes sown broadcast and worked into the soil hasten the decomposition of manure and bone dust applied to the soil, and furnish the tobacco (a potash plant) with potash and other valuable substances. 3d year—Root crops, say two acres Irish and sweet potatoes. 1 acre turnips, ½ acre ruta bagas, 1 acre mangold wurtzels, ¼ acre carrots, ¼ acre parsnips. A supply of beets, salsify, &c, for the table may be planted with the roots for feeding stock. Apply 200 pounds Peruvian guano and 4 bushels salt per acre. Only thoroughly decomposed manure should be applied directly to root crops. Turnips are easily raised where stock have been penned on the land, and may be sown broadcast; all other roots

should be drilled and worked by horse cultivators. The land should be subsoiled and constantly stirred until planted to save weeding as much as possible, otherwise the work will be formidable. 4th year—Corn sown broadcast, 4 to 5 bushels per acre. Sow an acre every fifteen days, and apply any manure you have to spare. It should be cut the day before it is used and slightly wilted. Early crops, like potatoes, onions, millet, &c, may be raised on the land reserved for the later plantings, but the land must be well manured after such crops are removed. 5th year—Two acres of rye sown in August and balance in oats. Apply 400 pounds lime per acre and sow clover. If the land is in good condition, sow 1 gallon clover and 1 peck each of orchard grass and timothy. 6th year—Clover for soiling. 7th year—Clover; turn on the stock about July; fallow about six inches deep for wheat, and apply 200 pounds flour of raw bone per acre.

Divide the remaining forty acres into four fields of ten acres each for the following rotation: 1st year—Corn on clover fallow; refallow and subsoil, and apply to each hill a handfull of poultry-yard manure composted with twice its bulk of rich loam and plaster. Plant the different kinds of beans to run on the corn and pumpkins where there is a rich sandy loam. Tomatoes do well tied up to the corn in the outside rows. These crops will not retard the growth of the corn, as they draw but little of the same substances from the soil. Peas may be planted between the rows of corn, or peas or buckwheat sown broadcast at the last working, for a green fallow. 2d year—Wheat and oats. apply 100 pounds bone dust and 200 pounds lime per acre, and sow clover. 3d year—Clover Plaster freely and cut hay; second crop for seed. Use no plaster on the second crop. 4th year—Clover for green fallow. If desired, the first crop may be cut, and the second well plastered for a fallow.

Where the clover fails to come up, or where the land is too poor or unsuitable for clover, sow peas. When these are not to had, buckwheat, tailing wheat, oats or corn are good substitutes.

A good rotation for the pasturage system is to reserve five acres for raising roots to mix with dry food in winter, and green crops to supplement the pasture in summer, and then divide the balance into five fields of fifteen acres each. 1st year—Wheat. After growth to be plowed under. 2d year—Five acres in tobacco and ten in corn. 3d year—Wheat after tobacco and oats after corn. 4th and 5th years—Clover. All these crops to be treated as above described, the second year in clover to be used for pasturage.

For either rotation the woodland should be under fence, and enough movable fence kept to enclose the fields to be grazed. Where the fence law obtains this will be all that is necessary. The number of stock must depend on the system adopted and the condition of the land. The best plan is to choose a few cows, hogs and sheep, and, if possible, buy or get the service of thoroughbred males. Increase the number as you find you can feed them, and never keep one animal more than you can feed well. Get the finest yoke of oxen to be had and feed them like horses, so that they can plow, and haul the green food, &c., to the stables, and manure to the fields. Keep four horses and mules (two of each is best), feed well, and keep them at work; gather woods-mould, leaves, pine-tags and everything of value to make compost or top dress your land. Take the best care of ashes. Never leave ashes or manure exposed to the weather. Plant a large orchard—say one hundred trees—each year. A good plan is to plant peach, dwarf pear and plum trees in the rows with the larger growing kinds—as the apple, pear and cherry—and fill up the rows with small fruits, currants, gooseberries, raspberries, blackberries, &c. Get several hives of bees, and buy Italian queens for them, and a treatise on the subject. The bees can reap a rich harvest from the buckwheat, clover, &c., Poultry is the most profitable stock raised. Build poultry-houses in your orchard, and raise them largely. If far from market, get kinds that lay well, but not much inclined to set. Get thoroughbred cocks every year, and your stock will soon be throughbred, and more than pay for the stock cost. The manure mixed with twice its bulk of rich loam and plaster, and rammed into old barrels, is equal to Peruvian guano. If convenient to market, get Brahma or Cochin-China cocks; if not, the Hamburg or game; grease the eggs, and ship in patent boxes at your leisure. Fowls are invaluable in an orchard, and turkeys in the tobacco. Geese are very profiitable for feathers. Ducks are very profiitable and easily raised.

Pigs should be kept in the orchard to eat the falling fruit with the insects in them. Waste fruit, especially peaches, cooked with middlings or bran, makes excellent hog feed.

For soiling, we recommend the Short Horn cattle, and the Devon for pasturage. The Berkshire is the best hog for the range. The White Chester has no equal where they are well-cared for; they require constant feeding and attention, but are not gross feeders. Under favorable circumstances they attain, at twelve months old, a weight of six hundred pounds. For our scant pastures, buy common sheep and cross with the Merino buck for wool, and with the South down for wool and mutton. Have no other but throughbred males from reliable breeders, and your stock will soon be worth a fortune. For soiling, open sheds are best, with a lane connecting them with the enclosed woodland, where the cattle may exercise a few hours every day. Let each animal have its particular place. Commence in May to feed them on rye, then clover, rye (second cutting), oats and corn. Bring them down gradually from green to dry food. For Winter feeding, all grain should be ground; the hay, straw, shucks, &c., cut and mixed with cut roots, meal, shorts, bran, or the like, and steamed. The root-tops, sweet-potato vines, lower leaves of cabbage, &c, should all be fed to to stock. Keep the stables well littered and plastered and put in peat or rich loam (dry) to absorb the liquid manure, unless you can drain it off into a vat, to be sprinkled on the land or on the solid manure. The quantity of manure made will, in a great degree, determine the measure of your success.

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In Southern California the tomato is perennial. A vine in Los Angelos has been trained over the sunny side of a house, and is now twenty-five feet high. It has blossoms, and at the same time fruit in all stages of growth.

# M. GEORGE VILLE'S LECTURE.

TRANSLATED BY MISS HOWARD.

(*Continued.*)

*Account Current of the Bechelrown Farm, under the management of M. Boussingault.*

Stable Manure the sole fertilizer. Profit $633,00 per annum.

DEBIT—for 125 acres in cultivation.

| | |
|---|---|
| Rental, $6.84 per acre | $ 855 00 |
| Cost of cultivation | 1,014 68 |
| Manure | 703 49 |
| Balance—gain | 513 00 |
| | 3,088 17 |

CREDIT—for 125 acres in cultivation.

*Produce Sold.*

| | | | |
|---|---|---|---|
| 140,675 lbs. | Potatoes (Irish) | $481 11 | |
| 34,050 " | Beets | 41 40 | |
| 4,900 " | Clover Hay | 20 48 | |
| 1,393 bus. | Wheat | 1,316 78 | |
| 56,700 lbs. | Wheat Straw | 107 73 | |
| 46,850 " | Oat Straw | 71 21 | $2,098 71 |

*Produce Consumed,*

| | | | |
|---|---|---|---|
| 73,400 lbs. | Irish Potatoes | 119 38 | |
| 163,550 " | Beets | 151 64 | |
| 140,300 " | Clover Hay | 335 88 | |
| 105,500 " | Wheat Straw | 100 22 | |
| 1,218 bus. | Oats | 280 34 | $987 46 |
| | | | $3,086 17 |

DEBIT—for Animals.

*Consumed.*

| | | |
|---|---|---|
| 183,700 lbs. of Hay | 1,156 50 | |
| 56,100 " Clover (fresh) | 335 88 | |
| 1,217 bus. Oats | 280 35 | |
| 20,300 lbs. Irish Potatoes | 119 30 | |
| 65,400 " Beets | 151 64 | |
| 42,200 " Straw | 100 22 | |
| 17½ bus. Peas (market price) | 17 12 | |
| Interest—at 6 per cent. on capital in cattle and pork ($1,541.85) | 92 51 | |
| Interest—at 13½ per cent.on capital in horses ($1,045.00) | 82 29 | |
| Wages of Cow-herd | 79 30 | |
| Wages of Milkers, &c. | 74 48 | |
| Wages of Swine-herd | 85 12 | |
| Wages of Plow-boys | 260 14 | |
| Interest for 6 months on wages | 14 03 | |
| Work of Blacksmith | 76 21 | |
| Work of Wheelwright | 32 12 | |
| Work of Cooper | 2 16 | |
| Work of Harness-maker | 40 43 | |
| Stacking of Hay and Straw | 44 39 | |
| Interest for 6 months, at 5 per cent. on above expenses | 4 88 | |
| Pay of Veterinary and cost of medicines | 20 76 | |
| Castration of Hogs and Bulls | 2 96 | |
| Cost of Oils, Salt, Leather, &c. | 102 89 | |
| | 138 87 | 3,414.62 |

CREDIT—for Animals.

| | | |
|---|---|---|
| Living weight gained in stable 13,500 pounds | 1,090 12 | |
| Milk not consumed by young stock | 642 96 | |
| Weight gained by hogs, 2,100 lbs. | 289 40 | |
| Work of horses, valued at | 490 20 | |
| | 248 45 | |
| 710 tons of manure | 703 49 | |
| | | 3,414 62 |

| DR. | *The Meadow.* | CR. | *The Meadow.* | |
|---|---|---|---|---|
| Rental | $1,027 95 | 183,700 lbs. | Hay consomed | $1,256 50 |
| Cost of Culture | 458 88 | 335,00 " | Hay sold | 350 60 |
| Profit | 128 27 | | | $1,607 19 |
| | $1,607 10 | | | |

| | |
|---|---|
| Profit from 125 acres (cultivated) | $513 00 |
| From Meadow | 120 27 |
| Profit | $633 27 |

In all that follows, I will constantly refer to abridged accounts, after this model, as it will then be easier to follow and discuss general results :

1.—*Abridged account of the farm of Bechelbronn.*

Exclusive use of stable manure. Produce consumed

CHAPTER 1.—*Culture.*

| Dr. | | Cr. | |
|---|---|---|---|
| Rental | 855,00 | Produce sold | 2,098.71 |
| Cost of culture | 1,014.68 | " consumed | 987.46 |
| 710 tons manure | 703.49 | | |
| Profit | 513.00 | | |
| | $3,086.17 | | $3,086.17 |

CHAPTER 2;—*Stock.*

| | | | |
|---|---|---|---|
| Feed | 2,243 98 | Produce animal | 2 462.68 |
| Gen'l expenses | 1,170.64 | Work | 248.45 |
| | | For manure | 703.65 |
| | $3,414.62 | | $3,414.62 |

CHAPTER 3.—*Meadow.*

| | | | |
|---|---|---|---|
| Rental | 1,027.95 | 1,837 quints hay consumed | 1,256.50 |
| Culture | 458.88 | 335 quints hay sold | 350.60 |
| Profit | 120.27 | | |
| | $1,607.10 | | 1,607.10 |

*Sources of Profit.*

| | |
|---|---|
| Cultivated fields | $513,00 |
| Meadow, by sale of hay | 120.27 |
| Total | $633.27 |

For the sake of simplicity, I have stated the total profit comes from the cultivated fields; but the meadow contributes its share by sales of hay, which so much reduces the profit from the fields as to give increased force to the criticism on this system.

But this is not all. This account, though right in generalities, is nevertheless a tissue of illusions. The straw and forage is given to the animals at cost price. Now this is an arbitrary and faulty affectatiuns against which I have energetically protested since 1867.

In support of my opinion, I have cited examples from distilleries and sugar factories. Do they set down the beets at the price it cost to grow them? *No.* Why should we act diffdrently in regard to the stables?

If you make this correction, instead of summing up by a profit of $513, the account of the fields shows, on the contrary, a loss of $100.70. The meadow thus becomes the source of profit. As to the stock, they are a continual hinderance, owing to the irregular and corelessly weighed food given them. And you will see that the manure set down in the first account 98 4-5 per ton cost now $2.83 per ton—that is to say, at least 57 cents above its real value.

[M. Ville, in continuing the Lecture, shows still greater fallacies in the old and unwieldy system of raising stock to keep up the fertility of the soil. While commerce, mechanics, mining, in fact all branches of industry are rapidly developed by steam and electricity, the farmer cannot afford to plod slowly hehind the manure cart, lest he become truly what he is so often falsely termed—"a clod-hopper."—NOTE BY MISS E. L. HOWARD.]

*For the Maryland Farmer.*

## Top-dressing Mowing Lands.

It is generally believed, with the fertility properly maintained, the quality of hay obtained from old meadows, is much superior to that from recently seeded fields. One reason for this lies in the fact, that, in old fields, the sod becomes firmer, the number of plants to a square foot is very much increased, and those less adapted to the soil maintain themselves with more vigor.

With an increased number of individual plants, the hay or grass is of a finer quality, and hence is considered more valuable for feeding purposes. But if a field is to be kept in sod for a term of years, and continually cropped, it becomes a matter of consequence to the farmer to know how its fertility is to be maintained. In one regard, farmers make a serious mistake in closely fall feeding their mowing lands, whether intended for permanent meadows; or to be used only for a few years, and then replowed. There is nothing that produces a worse effect than to permit a field to be gnawed so closely to the ground as to allow the roots of the plant to be exposed to the action of the frost, and deprive it of the amount of fertility contained in the aftermath, which should serve as a protection to the soil. The farmer has only to try the experiment upon two adjoining fields of about the same fertility and stand of grass, in order to become convinced of the effect of late fall feeding;where a field is so very fertile as to produce a rank growth of aftermath, it is better to cut it early, so as to give an opportunity for still another growth before winter, or feed it off a little, rather than leave the whole upon the ground, to become bedded to such an extent as to kill the roots, beneath, from smothering as it is termed. But it is not in the nature of things for any field, taking all the precautions possible, to maintain a regular and standard fertility, hence artificial means must be employed. The time has been, when there were existing prejudices against using manure upon the surface; but modern practices, have to a certain extent, established the advantage of an application of manure to the surface, even in cultivated fields; it is not surprising, therefore, that we find many

of the best farmers of the country, maintaining their mowing lands by top-dressing. The question then very naturally arises, when should the application be made. The answer depends upon the material employed; any substance, having manurial value, if not too coarse, can be used, and if belonging to the class of chemical manures, that are easily soluble they may be applied in the spring and favorable results be felt in the crop immediately following; but as a rule, it is more desirable for farmers to be able to make their own manure upon the farm, rather than be put to the necessity of purchasing something of which the actual value is little known, without the trouble and expense of an analysis. When farm manure is to be used, it is generally better to have it so decomposed or reduced by artificial means, to a reasonable degree of fineness, as that it may be spread evenly over the surface, so as to come in contact with the great est possible number of roots of the grass plants; in this way, the effects are more evenly distributed.

By some, it is advocated to apply manure as soon after cutting the hay as it can conveniently be done; but a reasonable objection to such a course, is, that it would usually be followed by a spell of dry weather; and if any virtue is lost by evaporation in dry weather, a loss will of necessity result. A preferable course, is, to make the application in the fall, a little previous to the commencement of the fall rains, spreading as evenly as possible, and then with the fall of the rain, the soluble portions are carried directly to the roots of the grass where the most needed.

Another mode is frequently practiced, but which is open to objections,that is, to haul the manure in the fall, dropping it in piles at a proper distance apart, allowing these to remain through the winter, to be spread as soon as the frost is out in the spring. The effect of this procedure is, that the first season, especially at every point where the manure heaps stood, there will be an exceedingly vigorous growth of grass, with but little effect upon the other portions of the field, which goes to prove that the more easily soluble portions have been carried into these small portions of the soil upon which the heaps were placed, leaving the other portions to be affected, as in process of time, and the further action of atmospheric changes ,the portions that have been spread are made soluble and available as plant food.

Still another mode, that is practiced to some extent, is, to take the manure directly from the cattle stalls in winter, and spread directly upon the surface, or upon the snow, if there is any upon the ground There have been objections to this course upon the claim, that, with the surface of the ground frozen, and a sudden rain, as is likely to occur at any season of the year, the manure will be washed away, especially if the surface is at all inclined; this however is denied by those who practice it,who also claim very decided advantages for this course, in the fact that the labor is performed at a season of the year when work is not at all driving, and can therefore be well done.

However the application is made, there are always some portions that are not properly reduced by the action of freezing and thawing, and require the passage of a bush, roller or some similar implement to crush and reduce them. A bush is a very good implement, for the reason that besides breaking in pieces, the tendency is to scatter more evenly over the surface. As another aid in the maintenance of permanent meadows, after spreading manure, it is often very beneficial to pass over the field with a harrow that will scratch the sod a little, to be followed by sowing on a little grass seed; this is also frequently done even with simply spreading of the manure, so that if there are any bare places, or such as have winter-killed, as some times occurs, they are provided for with seed.

With the exercise of good judgment in top-dressing, there is no reason why a meadow should not be made bountifully productive, for an indefinite period of time.

Wm. H. Yeomans,
Columbia, Conn.

## Sound Suggestions.

We copy the following from the *Reidsville* (N. C.) *Times*:

"Dropping in Richmond last Friday and being more on the hunt for wisdom than for money, we took a half hour's chat with George Watt, the celebrated plow man. on the subject of farming.

First, said Mr. Watt, preach to your people diversified crops.

Second, To use good seeds and good breeds.

Third. In the preparation of land to do half the work of cultivation by preparation before the ground is planted. Take a piece of land and half prepare it and it takes five times the labor to work it that it would if well prepared on the start

Fourth, No man, rich or poor, is able to keep a mean mnle, a mean horse, mean cow or mean anything else It takes as mnch to keep a mean mule as it does to keep a good one. It will take half the labor of a man to whip a mean mule ahead of him, whereas a good mule will carry the lazy rascal ahead without any whipping at all.

Suppose you have six mean mules, and six men, at fair, average wages, plowing them, doing half

work. Why three good mules with three average men will do the same work, saving half the expenses of labor, feed, gearing and tools. A man is just paying double wages in snch a condition of things as this.

DEEP PLOWING,

Plow deep enough, said Mr. Watt, to make the loose earth drink up the rain water. You may place a barrel of rain water and one of spring or well water side by side, and in a short time the rain water will become offensive and will be filled with millions of wiggle-tails, and breed mosquitos enough to torment a whole plantation. The spring or well water will not be effected at all. Then take a gauze sifter and strain the wiggle-tails from the rain water, and they will die because there is no matter in it to feed them, it having been left in the earth by filtration. The rain water is nothing in the world but what God Almighty has prepared in his laboratory to fertilize the earth, if men are wise enough to utilize it and plow their ground deep enough to drink it up.

## Lime in Soil.

The total quantity of lime taken up from the soil of an acre by an average corn crop of 50 bushels of 60 lbs. to the bushel, and 6,000 lbs. of stover would not exceed 25 lbs. A good crop of clover, 5,000 lbs. of hay in two cuts would require about 120 lbs. of lime. A crop of wheat of 25 bushels with 2.500 lbs. of straw would not require more than 10 lbs. A fair crop of potatoes, 9,000 lbs. or 150 bushels at 60 lbs. to the bushel, would not need more than 3 lbs. A crop 20,000 lbs. of beets only 7 lbs. and of 3,000 lbs. of timothy hay about 34 lbs. of lime. When we look a little further into the matter and see how small a proportion of this lime is actually exported from the farm in the crops ordinarily sold, and how large a proportion goes back to the soil from which it came, in the manure, the little need of taking pains to supply lime to plants for food will become still more plainly apparent. On any well managed farm the hay is usually all eaten by the stock, so that none of the lime in that part of the produce of the farm is exported; what little is retained by the young growing animals for the production of bone substance is more than made good by the lime in the water which the animals drink; in cases where a careful comparison has been made between the composition of the manure of a mixed herd of cattle, more lime has been found in the total manure than in the total fodder supplied, and this excess could have been derived from no other source than the water. The lime in the clover and timothy is not then lost to the farm. if the manure is cared for in any decent manner; the same is true of the wheat and other straws, of the corn-stalks and the roots. But in the acre's yield of Indian corn, taking the grain alone, there are only about two pounds of lime, and in the wheat but little more than one pound. In the other cereal grains we should have similar insignificant quantities of lime; and even if the potatoes are sold off the farm, as is often the case to a large extent. the stock of lime in the soil of every acre producing potatoes is diminished to the extent of only three pounds. At these rates of demand it would take a long time to make much impression on the reserve supplies of lime in the soil, when such reserves amount to from 1,600 to 2,000 pounds.—*Professor Caldwell, before the Elmira* (N. Y.) *Farmers' Club.*

*For the "Maryland Farmer."*

## The American Farmer on Hereford Cattle &c.

*Messrs. Editors*—In their April No. the Editors of the *American Farmer*,refer to "a *Mr. Miller*, who is an extensive breeder of the race, to bring the Herefords into favorable comparison with the short horn's, as beef producers." T. L. Miller after a long residence in Chicago, retired with a handsome fortune to a fine farm some forty miles south of that city, in Will county near the town of Beecher—and there established a stock farm, selecting Hereford Cattle, Cotswold Sheep and Berkshire Hogs, for his purposes—A cut of his barn, and de scription thereof appeared in the December No. of *National Live Stock Journal.* Mr. Miller having deliberately concluded that for certain sections of the country, Hereford bull's were best adapted, has through the National Live Stock Journal given his reason's therefor, he is sustained by Dr. James C. Wilson of Flint, Michigan, in an exhaustive letter under date June 1st, 1877, published in January number of "MARYLAND FARMER"—Neither Mr Miller, Dr. Wilson, or myself are prepared to say that Hereford's are the most profitable cattle, in all parts of the country, but we do claim that in the Northwest, Colorado, Texas and in this section they are the most profitable—In the early history of the Maryland State Agricultural Society, organized in 1848, Mr, Charles B, Calvert, and Col. Horace Capron, owned fine herds of Short Horns, they soon disappeared—Within the last few years, Mr. C. E. Coffin had a splendid herd they too have disappeared. Situated as we are near the Baltimore and Washington markets commanding ready sale for Hay and Grain, we want

cattle that will live, on, what we cannot sell. Had I to day, as many Short Horns, as I have Hereford's,they would consume all of my Hay and Corn, as it is, my sales average some $1800 per annum, from these crops.

As to the adaptation of Herefords by the Farmers of Maryland, I respectfully refer the Editor to Col. Ed Lloyd, who upon his large estate has used Hereford bull's for last fifteen years, having purchased not less than six—Capt. E. L. F. Hard castle, having used one Hereford bull, is now seeking another. Dr. Wm. H. DeCourcy of Queen Anne's has also been using Hereford bull's for years, also Dr. Chas. Tilghman, Mr. Webb of Dorchester, the late Horace Beck & Co., George W. Spencer of Kent, used Hereford bull's and Col. Spencer is now seeking one,—so much for Here fords on Eastern Shore—Many years ago the late Col. Wm. D. Bowie brought to his fine estate in Prince George' County a Hereford bull, and crossed upon Devons—he claimed a great improvement by the cross, the calves were uniformly red, with white faces—Mr. Bowie kept up his herd, until his death by repeating his purchases of Hereford bull's They are now to be found in Montgomery, Frederick, and Carroll counties, and every where are well thought of—I destinctly deny the correctness of the conclusion of Dr. M. G. Ellsey, Professor of Agriculture in the Virginia Agricultural College, and claim that the best quality of beef as compared with Short Horn & Devon is the production of the Hereford cross.

In this, I am sustained by the Record's of Smithfield Fat Cattle Show, held near London, in December of each year, the first exhibition took place in 1799. At these shows the Hereford's have won the "Gold Medal" for best Fat Steer or Ox, oftener than any other breed. Upon one occasion, the late Duke of Bedford, accepted the banter of late Right Hon. Charles Arbuthnot to show three Hereford Steer's at Smithfield Show, against three Short Horn's—The Hereford's were the winners.

An opportunity of testing my position will offer at the Fat Cattle Show, to be held in Chicago, in December next, when the pure bred animals, and their crosses will be offered in competition. In these these days, a party who undertakes to say that Herefords as milkers are so deficient, as to unfit them for the general farmer's use, is to say the least, ignorant, or prejudiced—I can show and am ready to do so to Dr. Ellsey or any other man as fine milkers among my Herefords as can be shown in any Short Horn or Devon herd in the country, and in as great proportion. There are as good Dairy animal's among my Hereford's, as in any breed, not excepting the Jersey's, Ayreshire, or Holstein,

As regards Short Horn's, *to day* I am offerd a herd of eight Herdbook Short Horn's for less money, than the same number of Herefords can be bought in this country.

Hayfields April 15th, 1878.

JOHN MERRYMAN.

## A Brief Memoir of Professor Brainerd.

The death of PROF. JOHN BRAINERD in Washington, on the 10th of March, of heart disease, has created a vacancy of no slight importance in the ranks of practical scientists. Although he has passed beyond the three score and ten years of ancient allotment, his mind had shown no loss of capacity for his official duties as an examiner in the United States Patent Office, where he found opportunites of usefulness as a tester of various patent claims wherein nice chemical questions were involved, relating to agriculture, such for instance as artifical fertilizers. fruit houses, devices for the destruction of insect pests and the like. In the last mentioned direction of investigation, as I happen to know, the Government has been wise enough in at least one instance, to avail of his knowledge through the Agricultural Department An illustrated paper on the more recent devices for insect destruction published as a paid for contribution to one of its anuual reports. But the identity of the authorship was little suspected by the public, because it bore the name of an unofficial personage of much greater pretentious, who gathered the article for the sake of a credit not his due, while Dr. Brainerd pocketed the pay as was his right. And here a word of explanation is perhaps called for. It is this: There is a narrow, tyrannical and absurb rule, which obtains in the Patent Office, whereby, on forfeiture of his place, the employee is forbidden to accept compensation for brain work from any department of the Government, apart from his regular salary—and this, although there be no ground for suspicion that the time used therefor, is not his own instead of the Government's.

Before his services were so wisely availed of by the Patent Office, as they had been since President Lincoln's first term, Dr. Brainerd filled the chemical chairs of the Ohio Homœopathic College at Cleaveland, which gave him opportunities which, as an enthusiastic devotee of natural science, he had craved from his earliest manhood. That chair gave a fitting preparation for the future application of chemical laws of the varied wants of every day life, whether in office or out. It will work no wrong to any scientist, living or dead, to say that, in his genuine love for, and success in applying these laws to agriculture, and especially to the department of fruit culture, no man of his time has excelled him, within the scope of his opportunities I make this qualification, because of his being necessarily hampered by the daily duties of the Patent Office,

For the pursuit of science as applied to fruit culture, Prof. Brainerd found a most grateful and useful field in the Potomac Fruit-growers Association of whose scientific committee he was the chairman, but to which committee's investigations he did not confine himself, as independent papers, not a few, read before it, and chronicled in the reports of the

association's proceedings made for the MARYLAND FARMER, have borne ample testimony. Amongst his reports from the scientific committee was his well-remembered report on "Pear Tree Blight,'s which was printed in full in the MARYLAND FARMER, accompained with plates from Dr. Brainerd" own drawing with the aid of the microscope, al thongh the illustrations must have involved considerable extra expense to the publisher. This paper, of which nothing need be said by way of praise, did much to bring its author prominently to the notice of the orchardists and scientific pomologists of the time. And it is safe to say of it, that no one paper of its class that has appeared of late, had a greater run or stirred up more discussions, than did the one refered to. Not that its theories, whether of cause or of prevention, were generally accepted by those entitled to sit in judgment, (that is not always the surest test of usefulness in such matters) for the contrary was the case, but for the reason that it caused the whole field of observation and iuvestigation as to the so long mooted questions of the cause and cure of the malady concerned, to be opened up a fresh, not only to old explorers, but new ones as well. Such a result could not have well failed of the great utility which we all may safely concede to it, within its sphere, without implying either assent or dissent from its positions.

Another thing it is safe to say: In reviewing the well spent life, we must come to the conclusion which the increasingly prevalent disease whereby it was terminated so suddenly, has despoiled Science of a most devoted and useful applier of her beneficient laws to human well being, and at the same time deprived the world of an illy-spared benefactor.

J. E. SNODGRASS.

The above notice of the death of Dr. Brainerd was written for our April number, but was accidently laid over until too late for that issue. Dr. B will be remembered by our readers as a frequent contributor to our columns, and by pomologists especially as the author of "Blight of the PearTree", an exhaustive essay, and well illustrated, which appeared in the November number of the MARYLAND FARMER for 1876.

## Garden Work for May.

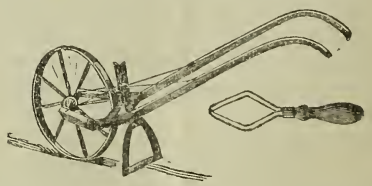
To the gardner as to the farmer, this is the great planting month of the year—Having his beds all highly manured and deeply worked, and the soil comminuted and mixed intimately with the manure and fertilizers, he is ready for work. Of course all the small fruits and grape vines have been properly pruned, dug about and mulched where required. The asparagus, Rhubarb, Herb and Strawberry beds in good order, the latter well mulched with straw or green grass cut from the lawn. Cabbage, lettuce, sweet potatoes, corn, okra, lima, and other Pole-Beans, squash or symblin, cucumbers, melons, nasturtium, should all be planted early this month.

*Sow* Peas, Beans, Beets, Salsify, Parnips, Carrots, Onion seed, Radish, Lettuce, Kohl-Rabi, Cabbage, Cauliflower, Brocoli, Cress, Endive, Spinach, for a succession of these nice vegetables,

As soon as the weather is settled and the ground warm, *set out* Tomato, Egg and Pepper plants. *Borecole, Kale and Brussels Sprouts*:—Sow a small bed of each, to be planted out in June or July—The first make excellent winter greens. The latter, manage as winter cabbage. Brussels Sprouts furnish small heads along their tall stems, like miniature Cabbage and after frost they are delicious eating. They stand out all winter and ready for use at any time after the little heads are well formed. If you have not a plenty of Celery plants or seed sown, sow a small rich bed at once so as to secure a good supply of strong plants for July and August planting. This wholesome and delig.tful vegetable is indispensable in every man's garden.

Make a rich bed and sow in it, Pepper, Sage, Thyme, Sweet-marjorum, Lavender, Parsley, and summer Savory, to be transplanted in large beds in July—These herbs ought to be found in abundance in every garden.

Permit us to call your attention to a valuable implement lately invented, called "Beecrofts' Patent Wheel Hoe," a great labor-saving invention and does its work perfectly—We give a cut which also includes a capital hand-weeder, separate from the "Wheel Hoe." These articles are also advertised in this number of our Journal.



We think it so conducive to the interest of every one who owns a small or large garden, that we cannot refrain from giving two, among many others, testimonials as to the value of this implement.

THOMAS MEEHAN, Esq., editor of the *Gardener's Monthly*, of Philadelphia, says in January number: "We have watched continually for some good thing to supersede this abominable implement (the common hand hoe), and have from time to time given sketches of wheel hoes of various kinds. The present one is certainly the best of all we have seen. It indeed reduces hoeing to an amusement, and might be sent to gymnasiums or to dyspeptic Clergymen as a means of gentle exercise in the garden, of benefit both to body and mind.

COL. JAMES SMITH, of Bangor, Me., seventy-nine years of age, says: "I can do as much with it in my garden as six young men with a common hoe."

Many other leading nurserymen, farmers and Market Gardeners give to it the highest praise and unqualified approval.

*For the Maryland Farmer:*

A SKETCHY LETTER FROM SANDY SPRING.

Sandy Spring Md. March 25, 1878

*Messrs. Editors:*—Having been reduced almost to a skeleton by an old companion, that has long stuck closer than a brother (*Bronchitis*), with its usually accompanying asthmatic symptoms, and heart-dilating influences. I dropped all employment and, in something akin to a panic, I made my way a few days ago, to the country. Not feeling quite ready to go to Florida or Minnesota, or other distant parts promising better health, after canvassing the claims of several more accessible places, I concluded I could not do better than to test those of Sandy Spring of which I had very favorable accounts. Accordingly I came here, to realize a good deal of benefit already, as I may state for the benefit of other health-seekers—especially in the way of overcoming the extreme debility that had taken posession of me. But, with enough of matters personal, I turn to those of more general public interest.

"Sandy Spring" is an appellation which embraces a small village, founded by Caleb Bentley about sixty years ago, and whose son Richard now owns the most of it, and with others runs the only store in the place, and also an area of country of several miles square. The village proper contains, besides the store, wherein the post-office is kept, a number of professional and mechanical offices and shops, including a savings bank with eighty odd thousand dollars on deposit, and a mutaul fire insurance company, covering polices aggregating about thirteen millions of dollars, but not a tavern or other grog dispensing nuisance.

The surrounding area of country referred to has been for more than a hundred years, known as a "Quaker settlement," so I am informed by the venerable Meahlon Chandlee, on whose farm I am sojourning, and he ought to know, for he was born, within a mile and half of the village, nearly eighty years ago, and has resided in the neighborhood during nearly all the intervening time.

Until about thirty years since, the land was very poor, producing nothing besides sedge-grass,where it had been cleaned and devoted to the exhausting processes of tobacco culture with slave labor, as it uniformily was in Pre-Quaker times. Now this neighborhood is nearly as productive, especially of wheat, as any part of Maryland. If any one doubts this let him come and look at the green wheat fields amid which I write.

In the initation of *the new order of things, the late Benjamin Hallowell* may be named as the leader, although many others would be mentioned as entitled to share this distinction with him, were I pretending to particularization in this sketch. He came here from the county in Pennsylvania identical with the one embracing Sandy Spring (Montgomery) in 1819.

But it was not to till the soil, nor indeed to write of the ways and means of success of science applied thereto, but to teach mathematics at Fair Hill, a famous boarding school for Quakers—boys and girls alike at the start, but afterwards converted into a school for girls alone. Having exchanged that field for a more inviting one at Alexandria, Va., it was not until he retired from teaching and returned here for the purpose of adopting a farmers's less worrying life, that circumstances placed him in the lead of the new order of things agricultural, to which reference has been made. In this it was more by what he taught, by voice and pen, before, during and after he so worthily held the Presidency of the faculty at the Maryland Agricultural College, in the direction of science applied to husbandry, than by personal experiments on the farm, that his important leadership was made effective. And yet he did not fail to put his own hand to the plow, in the spirit of "come" rather than "go," addressed to several worthy sons given to him as co-laborers.

I come to mention a curious instrumentality connected with the change for the better which came over the agricultural dream of Sandy Spring. The well remembered *morus multicaulus* fever, that so signally swept over the "Universal Yankee Nation," did not spare the cautious Broadbrims. To grow that fortune-promising tree, whereof it was deemed safe to say "there are millions in it," an importation of dry bones was deemed essential. Bone dust, or dissolved bone accordingly was purchased and brought here, at great expense of transportation, and applied to the young trees freely.

Faith in the marvelous mulberry tree vanished, but in the efficacy of the osseous ingredients it remained, to be stronger and stronger until guano was finally associated with it.

The latter was brought into the neighborhood by what was then considered a risky combination of farmers, in which were Robert R. Moore, who came here for health, Richard J. Bentley, Edward Stabler and Mahlon Kirk, the last named having previously experimented with about a quart on his corn hills, to the astonishment of his neighbors who flocked for miles to witness the marvelous result—which excitement became a very furor when, on R. R. Moore's farm, green wheat in winter was seen for the first time. Moore & Co. were indeed venturesome for they purchased a whole ton, with their joint means, finding its transportation from

Baltimore here so big a job, that it necessitated the reinforcements of a team of horses, with a fresh one of oxen, to get home the precious "stinking stuff," as my friend, "A. P. S." insists in calling all forms of ammonia.

So many broken down druggists that as to health have come here to recruit, within the last thirty years, amongst whose names I hear mentioned those of B. Bush Roberts, Isaac Hartshorn, Robert Moore, and Edward Stabler, that Sandy Sprihg has won the distinction of the *Druggist's Paradise*. All of these health-seekers live to attest, with books as well as grateful words, the sanitary virtues of their new surroundings. The best proof, perhaps, that they have not over estimated the curative influence of the neighborhood, is to be found in the fact that not one of these experts in the pharmaceutical art has ever opened a drug store at Sandy Spring, if we may except Mr. Hartshorn, who dispenses a few drugs from a corner of his store at Brighton, which is popularly included in Sandy Spring, although it is three miles from the village of that name.

The farmers of Sandy Spring have long been noted for their lively interest in *Agricultural Societies and discussions*, as shown by a number of associations, affording stated opportunities for interchanges of facts and opinions. There are several of these in existence, including the one which the late Benjaman Hallowell was chiefly instrumental in farming, and through which he taught his people "the better way" in the cultivation of the soil, while not neglecting, in his sphere as an eminent religious teacher amongst Friends, to do the same for them spiritually. Besides these instrumentalities the Sandy Springers find time to make highly creditable exhibits at the fairs of a flourishing county society, at the head of which I am pleased to find one who was a schoolmate at the Winchester Academy, nearly fifty years ago, in the person of Elisha John Hall.

At a neat and capacious Lyceum hall are held discussions and "sociables," in addition to the associations alluded to. There was given every winter, in past years, a course of popular lectures. The interest therein had been so dissipated by more *frivolous entertainments*, such as charades and other histrionically tempered performances, that lectures have been suffered to fall into disuse to a degree that would probably render the instructive lectures as pearls before swine, even if the lectures offered to give them free of charge—always excepting lectures by famous persons whom everybody would flock to *see* and listen to as a matter of course.

This sketch of what I have heard and seen of Sandy Spring has proven so much beyond the limits which my disinclination to exertion of thought and muscles had prescribed when I commenced it, (it is the sort of work I was particularly running away from when I came here), that I have no space for several agricultural items of a special nature I intended to write up. One must now suffice. It is the planting of tomatoes and corn in alternate hills, as has been done successfully, for several years, by ALBERT CHANDLEE, who has charge of the farm where I am sojourning. A branch of his business is canning for profit the vegetables and fruits which he raises. This he does largely and successfully. Anxious to secure a tomato as free as might be from the "white sun-scald," which had injured his tomatoes formerly, he resorted to this mode of planting as an expedient for *shading the tomato crop* to what he found from experience, was the needed degree. The plan of Mr. Chandlee is to set the tomatoes in rows four feet apart, with about three feet between the hills. Between the latter he plants sweet corn of a variety, which he prefers for canning. I am prepared to attest from experience that the plan is a good one. I now recall the fact that the fruit of some tomato vines incidentally planted, last season, amongst my lima beans, because of the necessity for crowding vegetables in a city garden, was better matured and more perfectly ripened than that on plants set where they got no shade.

J. E. SNODGRASS.

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THE POSITION OF AN AMERICAN FARMER.—F. G. E. in *Western Farm Journal* says:—In no country is agriculture so despised as in America. The Emperor of China holds the plow one day in the year as a mark of respect to agriculture. But, says the fast Yankee, "China is barbarous." China has better agriculture than America. She has the largest population, the longest canal, the widest bridge, the deepest well, the greatest wall, the longest avenue of large trees in the world—she dates back in authentic history before our Christian era---furnishes a good deal of our best scripture sayings---but is barbarous. A tenant farmer in English society ranks higher than a proprietor of land in America. France does not, like America, legislate against her agriculturist, but leaves them free and untrammeled and is commercially very successful. Her agricultural population are peaceful and prosperous, and would so continue if political demagogues would let them. Here we have demagogues and political quacks both to contend with.

## HISTORY OF AGRICULTURE.

BY

PROF. J. D. WARFIELD, A. M.

*Mr. Editor:*—I have condensed some historic facts upon Agriculture that may be of interest to farmers. From these it is evident that the history of field culture is but the history of civilization. From the Bible we get gleanings of our earliest husbandmen. Cain was "a tiller of the ground;" Abel, a "keeper of sheep;" "Noah became a husbandman and planted a vine-yard;" Abraham was "very rich in cattle:" Lot had "flocks and herds and tents;" Jacob gave Esau 580 head of cattle; Moses was a shepherd; Gideon was found threshing; Saul, when King, was driving a herd of cattle from the field; David was fond of feeding his ewes; Elisha, when sought by Elijah to receive the mantle of a prophet, was found ploughing with twelve yoke of oxen. The earliest accounts of Chaldea and Egypt record them famous for raising corn. The Valley of the Nile, extending from 4 to 5 miles in breadth and from 400 to 500 in length, by means of periodic overflows, was so rich that seed needed only to be sown and tread in by herds of cattle to yield abundantly. Among the hieroglyphics on an ancient tomb of Egypt, is found the representation of an implement resembling a pick, which was used as a plough. From Egypt, cultivation extended into Greece. One thousand years before Christ, Hesiod gives an account of a plough consisting of a beam, a share and handles.

The Greeks must have understood draining, for the city of Sparta was built upon a marsh. Fine herds of cattle, horses, sheep and swine are recorded. Manures were also employed, introduced, as Pliny says, by a Grecian King, Augeas. Different soils, as sand and clay, were mixed together; and subsoiling was known. Apples, pears, cherries, plums, quinces, peaches, nectarins, figs and lemons were raised. Xenophon, the recorder of the memorable "Retreat of the ten thousand," was the best writer upon Agriculture.

Field-culture did not reach perfection in Greece, partly on account of the nature of the soil; but mostly, because, the historic Greeks left their fields to menial slaves, whilst devoting their energies to war, commerce and building up cities. In Rome, however, every citizen had a tract of land given him by the State. At first, only 6 acres could be held, but afterwards, 50, and finally, 500 acres. The spade was first employed in preparing the soil, and the yield well repaid. Pliny thought the productiveness of the soil was owing to the fact, that "the Earth took delight in being tilled by the hands of men crowned with laurels and decorated with triumphal honors." Cincinnatus, in 459 B. C. was called from his plough to fight his country's battles.

The Roman Senate ordered the translation of 28 books of Mago, the Carthagenian writer upon Agriculture, for the benefit of Roman citizens. One hundred years before Christ, Rome had an agricultural literature inferior only, perhaps, to that of Germany, France and England, to-day. Cato so regarded it as a grand point of husbandry not to have too much land in one farm, for more profit came by holding little and tilling it well. Virgil says,—"The farmer may praise large estates, but let him cultivate a small one." Varro says,—"Nature has shown two paths which lead to a knowledge of farming, experience and imitation. Farmers hitherto, by experiments, have established many maxims, and their posterity generally imitate them, but we ought not only to imitate others, but make experiments ourselves, not directed by chance but by reason." There seems to be no record of the Roman improved stock. Columella, who wrote 500 years after the time of Cincinatus, gives the following points of a good cow: "A tall make, long, very broad head, eyes black and open, horns graceful, smooth and black, ears hairy, jaws straight, limbs moderate." He also advises the following royal treatment of working oxen. "After oxen get through ploughing, and come home heated and tired, they must have a little wine poured down their throats, and, after being fed a little led out to drink."

As the Roman Empire grew in wealth and power, field-culture was entrusted to bondmen, of which Hallam says: "The laboring husbandman, a menial slave of some wealthy Senator, had not even that qualified interest in the soil which the tenure of villanage afforded to the peasant of feudal ages." Composts were made; guano used; lupines and clover were ploughed in green, and grain-stubbles burnt over for the ashes. It must be remembered, it was not until a hundred years after Christ, that even a water wheel was in existence; wind mills were not used till the 11th century. We can not conceive of the vast force of slaves, that must have been employed in grinding corn for ancient empires and armies. When Xerxes, of Persia, in 480, B. C. invaded Greece with 5,283,220 hungry barbarians, the cost of feeding such a host brought many cities to the brink of ruin. China, India, Babylonia, Assyria and Egypt had raised large armies, built vast cities and sent swarms of early settlers to Europe and the Northwest; and yet history is silent upon the modes of feeding the bone and sinew of these vast empires.

But history again repeats itself. At first, the chase and the flocks sustain the roving warrior; then, rude culture of a virgin soil; then, luxury, wealth, spoils of war, cap the climax of oriental splendor; slaves take charge of the field and its productions; to the victor belongs the spoils, so nations after nations become blotted from the records. At last, effeminacy, luxury and wealth set their seal upon Rome. A vast tide of conquest from the north, swept over southern Europe, pouring in its race of barbarians. Scarcely a glean of sunshine lights up the gloom of this period. In Spain, the conquering Saracens had introduced irrigation, built reservoirs, canals, aqueducts, all of which laid the foundation of subsequent Spanish glory; but elsewhere, there was not an improvement, from the fall of Rome, in the 5th century, to the 16th century, to be recorded. Roman occupation of Briton for a period 400 years, had much improved the island which is to become the mother of America. When Saxon pirates, however, broke in upon these peaceable citizens, crops were destroyed and the chase fed these sturdy warriors. The Saxons had large herds of cattle, but small quantities of wheat, barley and oats were raised. No hoed crops, or vegetables, were attempted. Even as late as Henry VIII, his first queen, Catherine, had to send to Holland for salad to supply her table. Neither Indian corn,nor potatoes,nor cabbages were known in England till the 16th century. The following quaint description of an English table in the 12th, 13th and 14th centuries is given :

"The meats served into the table, was alwaies in great chargers filled with pease and Bacon ; Gammons of Bacon; huge neats toongs salted; great pieces of beafe, boyled poultry and pottage about them; boyled mutton, veale, and other grosse food almost in every ordinary family; and they gorged in these victuals so long as could. Afterwards they brought in other meates, oftentimes, with unsavory lard, but it would go for pigs and hares. After this second service had stood awhile on the table, well-neere to no effect, then came in more dainty meate of foules; as mallards, wild ducks, ringdoves, young pigeons, partridges, wood cocks, quailes, plovers, turtle, &c., which are carried away never toucht."

Peasants lived chiefly upon bread made from barley ground in a hand-mill and by themselves. It was not till after the 15th century, that peasants had any security for their property. The feudal system and the crusades elevated the peasant to some slight degree by increasing the value of his labor. Even as late as 1745, a noted Frenchman said to his King, "The misery of the mass of the people is indescribable."

[TO BE CONTINUED.]

## The Agricultural College.

*Editors Marylaud Farmer:*

In the brief sketch of the history of the Agricul tural College, prepared by Professor Warfield for your April number, there were several points which, as historical facts, need to be more accurately stated. My personal connection with all these matters from the beginning, enables me to do so from memory, without access to the record, and I ask a short space in your columns for the purpose.

I shall notice these points in the order of their occurrence in Professor Warfields sketch.

The first is in the account given of a meeting of the Board of Commissioners to take stock subscriptions, of which I was a member, in these words: "In September 1857, Mr. Bowie reported that he had collected the sum of $42,300. The mimum amount of 50,000 was made up by the Commissioners."

The word "collected" here used, should be *subscribed*. This is apparent, however, in the context, and my purpose in quoting is to call attention to the concluding words "the minimum amount was made up by the Commissioners." This indicates that the sum then deficient about $8,000 was subscribed by the board *as a body*. The truth is, though the record may not show it, that it was subscribed by four members of the board individually. The interest of this fact will appear as I proceed,

Fifty thousand dollars subscribed was the least amount with which, under the terms of the charter organization could be effected and future operations proceed. One-half of this sum was to be collected, a board of trustees was to be chosen, a site was to be selected, farm purchased and a certain amount of building required. It was now September and all these must be accomplished by the 6th of March following—a failure involving forfeiture of the charter. It was quite plain that not a day more could be spared waiting for subscriptions. The question arose, what was to be done?

Some members of the board were absent, and others refused to take the necessary risk, and the deficiency was supplied by four members, each subscribing about $2,000—it being understood they should be released as further subscriptions were secured.

When the popular industrious and efficient agent, Mr. Bowie after canvassing the State for eighteen months, could report but $42,000—there was a feeling akin to disgust at what was considered a lame conclusion; and it came near

proving the conclusion of thewhole matter. It made, in fact, the very crisis of the fate of the undertaking.

The next point I note in Professor Warfield's statement is contained in these words, "Messrs. Earle, Wharton and Worthington were appointed to purchase it, (the farm). Eight thousand dollars and 880 shares of stock at $5 per share were agreed upon."

This would make the price of the farm $12,400, when in fact it was $21,400; eight thousand dollars paid in cash, $10,000 left as vendor's lien on the property, and 680 shares of stock at $5 per share. Mr. Calvert had previously subscribed for 200 shares which, added to these, make 880 now standing in his name.

The next statement noted in Professor Warfield's contribution is that, at the time Mr. Onderdonk became President September 1861, "the debt was now $20,000."

I shall not claim to remember figures accurately, but it can be made apparent, I think, that the debt was at that time much nearer $40,000. The construction accounts alone, including the college building, repair of "Rossburg" house and two professor's houses did not fall short, perhaps, of $56,000 and the complete furnishing of the college added about $7,000. Add to these the purchase of stock of the best quality for a farm of 480 acres, horses, mules, cattle, wagons, implements of every kind, from a hoe to platform scales for weighing hay; the cost of grading, making roads and planting college grounds, and making and planting orchards and garden on an entirely new and not fertile site, also the price of the farm—there will be found an aggregate expenditure for purchase, construction and equipment of not less than $90,-000, And this was, probably, in the mind of Dr. Van Bokelen, the chief of the State Board of Education, when he asked the Legislature to give $45,000 for half the property.

Up to this time the Trustees could not have realized from subscription lists, after paying their agent ten per cent. on all subscriptions and various losses and diminutions, more than $40,000. This, with two years of the State's subscription, before the college went into operation, would make all the available means, and leave a debt supposing the figures correct, of $38.000.

This statement is important, because I know that outside of the college, there has been an excusable misunderstanding of its financial affairs It was this great burden of debt, be the figures somewhat more or less, with its accumulations of interest during more than seven years, which pressed upon the college like a night-mare. It was not in one sum, but in many, a portion waiting patiently enough, but others urging payment. All the resources and all the expedients of those charged with them were taxed to the utmost, and current receipts on college account shared the general trouble. This was the reason that there was "no money to pay salaries" at the time of my first appointment as instructor.

Mr. Onderdonk's administration of the college from September 1861 to September 1864, and my own from that time to May 1866, when it was closed to re-organize under the act of Congress, embraced nearly all the period of the war and the year following. We were receiving then, of course only $6,000 a year from the State, the price of flour had gone as high as $15 per barrel, and coal the same price per ton and other things in proportion; currency had fallen below 50 cents to the dollar; the annual taxes were about $300, and insurance about $200. But it is demonstrable that throughout this period there was not a dollar added to the indebtedness of the college for current expenses.

There was a full corps of professors whose salaries were all paid, and it may be considered a test of the quality of the instruction that a student who passed through the lower classes and to the close of the junior year of a full college course entered at once the senior class at Princeton and graduated the next summer, standing number 18 in a class of about eighty.

Professor Higgins was not "elected to the chair of Chemistry in 1863" as your statement makes it, but in 1866 at the time of re-organization.

An important omission from the corps of professor, during the period spoken of, is the name of Mr. Townend Glover, the distinguished Eutomologist to the department of agriculture at Washington, who left the college to take the place he has held in the department ever since, and to whose genius and industry it owes its magnificent museum of agriculture.

Very respectfully yours,

N. B. WORTHINGTON.

*Baltimore April 16th* 1878

[In connection with Prof. Warfield's history of the College the above article of Prof. Worthington, —than whom no man has had better opportunity of knowing every matter concerning the College affairs, he having been in some official capacity connected with it from its incipiency, to within the last two years—show conclusively the hampering difficulties this much abused Institution has labored under during its whole existence. It is now we are happy to say free from indebtedness and on a solid foundation with a bright future before it, to develop all the benefits to our people which its wise founders intended it to confer, and become the pride of the sons of toil of Maryland instead of a bone of convention "between parties."]—*Eds. of Maryland Farmer.*

## Farm Work for May.

The uncommonly propitions winter and spring have advanced farming operations greatly ahead of usual seasons--This is the great corn-planting month, though this year no doubt much has already been planted and is in many sections, up and growing—What this early season may portend we cannot surmise, but we advise our readers not to be beguiled by its suggestive allurements into an extension of area of crops beyond what they can cultivate well after thorough preparation of the ground and heavy manuring of every acre under cultivation—If the season seems to urge us to plant in excess of our abilities to do full justice to any special crop, let us resist the temptation and diversify our crops and sources of income, taking warning from the experiences of the past year.

### CORN.

Get the corn planted early, but delay planting until the land can be put in the best order; remembering for this crop especially, nearly all the work it requires in its cultivation, is to be done—if you desire to economize labor, before the grain is put in the ground. If the land be not wet or moist from recent rains, soak the grain in a solution for 24 or 36 hours, drain it and roll in plaster or sifted ashes–The solution may be made of 1 lb. of copperas dissolved in 5 gallons of hot water, or the same amount of copperas or saltpetre or both with 1 quart of common tar. The latter is said to be a preventive against birds pulling up the yonng plants, and the copperas or saltpetre gives to it stimulus in its early stages. We once used simply a weak lye of ashes, then rolled in plaster, with decided effect. Corn well soaked, soon vegetates when planted in a dry, warm soil, and the sooner corn sprouts after being planted the more vigorous will be its early growth. Plant corn with a corn planter, or roll the rows heavily; or if covered by the hoe, pat each hill hard, so as to compact the earth above and around the grain. If rain or other causes prevent the planting of corn after it has soaked for a day or more and then rolled in plaster or dry leached ashes, or well-slacked lime, it will do to plant a week after. If well sprouted it will almost immediately appear above ground after being planted. It has a wonderful tenacity of life—we have seen a sprout bore like a gimlet through a solid clay lump four inches thick, and make a vigorous growth, bursting the clod by its innate force as it grew in size—Yet while corn will vegetate under difficulties it is best to have its bed soft and the soil well pulverized—Badly prepared corn ground requires great and constant labor to keep down weeds and get the land in order, and in doing so, the corn is more or less retarded in growth, if not killed outright.

One important matter is too often neglected by farmers in planting corn—They are not careful enough to get good seed of a prolific variety. The seed should be changed every few years unless very carefully and judiciously selected annually with a view to its perfection in some one or more particulars, corn for seed does best if procured from a northern rather than a southern locality unless it is desirable to grow very early corn. In selecting seed corn, that should be chosen which is low-growing with large ears, and shooting near the ground. It should have generally two or more ears to the stalk, the grains should be large and there should be not less than 8 rows on the cob, 16 rows would be better if the cob be long and the grains large—No corn should be planted that does not weigh at least 60 lbs. to the bushel, struck measure.

We saw some fine yellow corn lately for sale in Baltimore, and the Messrs. Whitman have on hand a remarkably white large grained goured seed variety, said to be very prolific, which was grown near Reisterstown Balto co. Md. In that county of late years some remarkably heavy crops have been grown, from 100 to 135 bushels per acre.

We like the drill-system and would advise planting with a drill which opens the furrow, drops the corn and fertilizer, covers and rolls, all at one operation. For low-growing corn the drills, should be 3 feet 6 inches apart, and the plants to stand one every 15 inches as near as can be accomplished. If tall growing southern corn, the rows should be 4 feet apart—If laid off in checks, 4 by 3 feet is the right distance in our opinion.

With two stalks to the hill, and if low-ground Northern corn then 3 stalks to the hill. These distances are intended for good fertile land or highly fertilized and manured land. To have large yields of corn, the farmer must make his soil rich, prepare the land perfectly and plant corn which grows low, shoots low, bears from two to four good large ears of heavy grained corn, and cultivate the growing crop at least every 8 days until it shows here and there signs of tasseling, then stop working it, leaving the land level and light with a cultivator--The idea of root pruning, by cutting the roots with plows, we do not recommend because we do not comprehend the philosophy of the thing, nor do we believe in "suckering" corn after the suckers have grown two or more feet high--We do not believe that the lancet is essential for man's health, nor do we see the use of the knife to bleed growing plants.

### TOBACCO.

Much tobacco will no doubt be planted this year in this month, but we would say to our planters, be not in too great a hurry, "a week in the bed is equal to 3 weeks in the field." Wait, as it is early in the season, until the land has been thoroughly prepared and the manu-

res used, well incorporated and intermixed in the soil, and the plants have got good bunchy roots, then with a fair season every plant will live, Although it is true a small plant in May will take root better on being transplanted, than a large one will in June. when the ground is hot and the sun is scorching----Should the cut-worm be feared, sow, just before scraping the land into hills, three or four bushels of salt per acre, it is said to be, and we think so, an effectual remedy against the cut-worm and it will help to fertilize the plant, along with the plaster that should be dropt on such plant in small quantity within a few days after the plant has been set in the ground.

Do not send your last year's crop into market until it has been perfectly conditioned, take time to assort it properly, so that all the samples from each hogshead will be uniform in length, color and texture. See yourselves to the packing—Much depends upon the orderly and smooth manner in which tobacco is packed. Packing in the hogshead is not to be done rapidly or slovenly, if you wish to get a decent sample, or make sale of it above the present ruling starvation prices. Small crops well managed from the seed-bed all the way to the market, in all its stages, and above all do not spare expense in manuring the land heavily, and in keeping the plants free from worms.

STOCK OF ALL KINDS.

Milch cows with calves ought to have as much green food as possible, and a bucket of meal and water twice a day if they have not a good grass pasture, or green rye provided for them. If stabled they ought to have some mill- feed with green rye. If no green food, then their hay should be cut and well moisted with water and corn or rye meal sprinkled with it to make a rich mess of "chop."

Young lambs and foals ought to have a pasture of young clover to run on—

Feed the work cattle and horses high and groom them well, as this is a trying time of the year for them and their work is hard. Give plenty of clean water and let them have access to salt and ashes.

Sows with young pigs ought to have plenty of grain with slops and sour milk. Arrange to have a pen where the pigs can drink their swill of milk undisturbed by the older hogs or their own mothers

ROOT CROPS.

Potatoes, if not planted last month as they should have been, must now be planted at once; also, sow carrot, sugar beet, mangels, &c. Let the land be well prepared after a deep plowing, and have it highly manured, and fertilized highly. Drill the seed in.

ORCHARDS.

If not already done, go over the orchards and prune and shorten in wherever required, and wash the bodies and parts of the largest limbs with a mixture of soft soap, ashes, a little salt and water, or soap suds enough to bring it to the consistency of thick whitewash. Apply with a brush or mop.

SWEET POTATOES.

This important crop is too much neglected by our farmers. It is more certain and less liable to enemies of all kinds than the Irish potatoe. It requires less labor in making and securing the crop, and brings a higher price in the market, and yields on an average more bushels per acre. The sweet potato can be kept over winter as well as the Irish potato. Make the usual hot-bed of fermenting manures, on this spread 3 or 4 inches of good soil, then lay on the potatoes and cover them with fine soil. Then, an experienced cultivator of this crop writes to *Our Home Journal*, of New Orleans,—"There should be laid on top of the bed a layer, four or five inches deep, of dry straw, hay or fodder, which should be weighted down compactly and covered with boards to protect the bed from cold or rain—this to remain on till the sprouts are through the soil, which will be in one-third the time it ordinarily takes, and with nothing like the amount of danger of rotting there usually is. Of course the bed should be examined from time to time, to see if the sprouts are above ground. And should they be of considerable size when the covering is removed care must be taken not to let them have too much sunshine at once. After the plants have begun to form leaves (not before) the bed may be watered,as usually recommended,with soap-suds,etc.

Second, as to the sort of land for sweet potatoes. It is generally considered that sandy ridge or hill land is the most suitable; but it is an error. I invariably raise the largest crops on what is known here as posts oak flats, that are too wet to produce good corn.

Third, another error is in the notion that sweet potatoes do not need manure. There is no crop on which a good nitrogenous fertilizer like cotton seed, guano or (if clear of weed and crab grass seed) stable manure, pays better than sweet potatoes and a couple of bushels of salt to the acre, broadcasted at planting time, will increase the crop immensely."

A crop of sweet potatoes is valuable as a popular vegetable in a family, very profitable as a market product and the ground, after all the fair sized roots are taken off, will afford the best sort of food in large quantity for fattening hogs, who will gather for themselvs with great delight all that remain in the patch. It is said the best bacon is made by hogs fed on acorns, sweet potatoes and then corn for a few days before "killing," to harden the meat.

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In San Bueneventura, a grapevine, planted seventeen years ago, measures forty inches around the stem, and covers an area of about eighty feet.

# HORTICULTURE.

## THE MIKADO PERSIMMON.

[We give a good illustration above of one variety of the Japanese Persimmon—the Mikado—flat or round shaped, flesh more solid, orange or yellow colored, the same as grown by Col. Holister.]

At a meeting of the California Academy of Sciences, a specimen of the Japanese Persimmon was presented by Mr. Hollister, in whose orchard near Santa Barbara it had been grown. The *American Naturalist* reports the following upon the fruit made by Mr. Hollister, who regards it as the most beautiful to the eye and delicious to the taste of any he has seen. It has a rich yellow color, and seems more like a ball of wax than fruit. "This variety" said Mr. Hollister, "known as the Dyospyros kaki, differs materially from the wild persimmon of the Southern States, as it ripens without frost, and is equally palatable whether fresh or dried. The tree is highly ornamental, a prolific bearer, and as hardy as the pear. Its season is from October to March, coming in when fine fruits are scarce. The fruit is of a bright yellow, orange, or reddish color, and is pronounced equal to the pear or peach. It is also sufficiently solid to be packed and shipped with safety. It grows to a large size, attaining in some cases a pound each in weight."

Mr. Hollister furthermore states that the Japannese Persimmon is adapted to the soil of California, and requires simply the same cultivation as the apple. The grafted trees bear in about four years, and the seedlings in double that time, although these last are not reliable.

## New Trees and Plants.

Those excellent and celebrated nursery--men—Messrs. Ellwanger and Barry have issued a supplement catalogue describing an unusual number of new and rare trees, shrubs and plants, the names of which we can only notice now, leaving out most of the botanic names and descriptions, some of which we hope to give hereafter.

DECIDUOUS TREES.

Among these we notice several varieties of Japanese and Norway Maples.

There is a new Alder—"A. tiliacea" (or Linden-Leaved), a new Birch, "costata," a new Golden chain, "Parksii," four new Ashes; and two Elms.

EVERGREEN TREES.

Two new seedling spruces, originated by the firm from seed and named after the heads, "Abies Ellwangerii," and "Abies Barryii." These are the seedlings of the grand Norway Spruce, more dwarf and compact, hence better adapted to small or ordinary-sized grounds.

DECIDUOUS SHRUBS.

Here we have a new Deutzia, "crenata purpura," seven new Hybiscus or Althea, and two plums, "Simonii," and "virgata flore rosea pleno," one Philadelphus or Syringa, "foliis aureis," and one Wistaria, "double purple."

NEW PLANTS.

Two new Coleii,—"Multicolor," and "Mrs. Knatchbull Hugisson;" and quite a list of new strawberries, prominent among which is "Sharpless' Seedling," which they recommend as the largest and best strawberry now in cultivation.

They have one new fruit, "Briggs' Red May Peach," originating with J. W. Briggs, of California said to be the earliest of all peaches introduced.

## CHUFAS.

MR. T. G. WALLACE, STONE MOUNTAIN, GEORGIA gives to the public the following statement about the CHUFA and its cultivation:

The CHUFA is a nut that grows in several respects similar to the Ground Pea, and is about the size of a shelled ground pea It is full of saccharine matter, healthful food for man and beast. They are particularly attractive to hogs and poultry; the former will fatten on them the year round without the consumption of a single grain of corn, and the meat is as good as corn-fed. Will produce on common land 200 bushels to the acre, Plant from the 1st of April till May in rows two feet distant, dropping two nuts in each hill 15 inches apart. Soak in water 48 hours before planting; cover about two inches deep with a board; cultivate with a sweep until they very soon take care of themselves

*For the Maryland Farmer.*

## Profitable Strawberries—My Experience.

Four years ago this spring I set a small peach orchard quincunx 15 feet from tree to tree, and cultivated the ground between the trees by raising potatoes two years. In November, after digging the last crop, I set two rows of strawberries, three feet apart between the rows of trees, which were thirteen feet apart. I set till the ground froze and finished in the spring following. The plants were set 15 inches apart. If strawberries are allowed to bear the year the plants are set they exhaust themselves and are of little value. The ground was prepared by plowing a furrow, and putting in a moderate supply of manure. When the plant blossomed, all the flowers were picked off. They were only hoed once during the season (1876). In 1877 nothing was done to them till after the crop was gathered except to pull up some large weeds, and cut off some runners. There were two varieties so treated, the *Seth Boyden*, best berries measured 4 inches round, and 50 of them after being hulled ready for canning, filled a quart measure; the *Wilson*, a sourer berry with the same treatment, took 80 of the best berries to fill the same measure, the same day.

The ground was sandy, loam, and only moderately fertilized before the strawberries were set. Our most successful cultivator only gathers two crops before renewing his plants.

The best of the peach trees bore a bushel only, the fourth season from the setting.

Hoping this experience may benefit some of your numerous readers I remain,

Yours Truly,

Vineland, N. J. }
April, 9th 1878. } W. W. Meech.

THE FRUIT GROWERS ASSOCIATION held their monthly meeting on Tuesday, the 2nd of April in Washington—President Gillingham in the chair, and Dr. Snodgrass, secretary. The subject fixed for discussion was "Strawberries," which was introduced by an essay from Mr. Gillingham, and occupied a short time. Several members made reports relative to the effect of the recent cold snap on fruit in this neighborhood. Cherries, peaches and pears were reported as considerably injured, but the blight was said to be far from universal. It was noted that in orchards on the hill sides the buds of the lower trees suffered, while those ef the upper ranges remained intact. Mr. Gillingham stated that sometimes his thermometer, 150 feet above tide, differed as much as 15 degrees from those of near neighbors, whose houses were in the valleys. Resolutions of regret at the death of Dr. Jehu Brainerd were adopted.

## Cultivating Potatoes.

The Irish potato is one of the staple products of the farm, and when well cared for will produce a large yield, depending somewhat upon the variety. There is probably no one ordinary product of the farm that is more largely consumed than this. The chief discouragement for the cultivation of this crop at the present time is the presence of the "*Doryphera* 10 *Liniata*," and yet, by the exercise of proper precautions this obnoxions insect can be subdued. The yield depends upon the soil, preparation, manuring, and after cultivation. The potato, while it will grow upon a comparatively poor soil and furnish some tubers, prefers a soil of full average fertility. While it is claimed by some that an old worn-out pasture is suitable for growing a crop in excellent perfection, for ease of planting and after cultivation there is nothing better than a field that has been previously cropped with a hoed crop—corn being preferred—giving a preferable rotation.

Although the potato is a great feeder it is much better that the manure be incorporated with the soil, rather than have it applied in the hill. This is why the crop will advantageously follow the corn crop, especially if that has been liberally supplied with manure, as it will have become thoroughly decomposed and incorporated with the soil, and is just the fertilizer for the potato. In case enough manure is not already applied to the soil, let a sufficient application be made to the surface before plowing that it may the more surely be mixed with the soil, especially if green manure; but if composted or decomposed manure is used it may be spread upon the sorface after plowing.

Let the plowing be to good depth, and as soon in the spring as the ground becomes sufficiently warm. After plowing, whether the manure is plowed in or spread afterwards, the ground should be thoroughly harrowed over to cause a thorough pulverization of the soil. After the harrowing has been done mark off the field with the horse-plow by means of furrows from two and one half to three feet apart and to a depth of two or three inches in case phosphate or some commercial fertilizer is to be applied, and deeper if some coarse manure is to be used, as will be hereafter described. With regard to seed and the present modes of seeding there have been some radical changes within a years past. It is now believed to be established by many carefully conducted experiments, that a perfect specimen of a medium sized potato is the best that can be employed for planting purposes. If it is desirable to hasten the crop, it may be accomplished by getting the potatoes assorted and bringing them into a light warm room that the eyes may be considerably developed before planting. When the field is ready for this part of the labor, cut the potatoes in pieces, each piece having two eyes, and drop one piece in each hill, the hills not to exceed one foot in distance apart. If ashes, plaster, phosphate or any other substance is to be applied in the hill to stimulate early growth, let it be dropped by the side of the potato, and then let them be covered by running a horse-plow lightly upon both sides of the row, turning two furrows together upon the potatoes. In soils of a heavy character it is frequently very desirable to apply some coarse manure in the hill to keep the soil light; for this purpose horse manure, (having some bedding mixed with it,) is excellently adapted, and will produce very smooth and handsome potatoes. The application is made by strewing it along the furrow upon which the potatoes are dropped and then covered as above indicated. In this way the ground is left slightly ridged, and just as the potatoes are coming out of the ground, many practice going over the field in the direction that the rows run, with a harrow, which has the effect to loosen the soil and kill all the young weeds without doing any injury to the growing crop. The potato, like other crops, required to be kept free from weeds and any foul growth that would tend to choke the free development of the desired crop. As a general rule, with the harrowing as above indicated, two hoeings faithfully accomplished will be amply sufficient for the potato crop. Early in the fall they may be dug and after drying a little time may be stored for winter use, or shipped to market. No mention has been made of implements to be used because of their great number. The tendency of the age is to save labor, and this could be accomplished by using True's potato planter, which makes the furrow, cuts the potato, drops it, and the special fertilizers, covertng the whole of one operation. There are also implemements whose use does away with a large part of the hand labor in hoeing, which may be very profitably used if upon the farm. As to varieties to plant, each farmer must be his own guide in that direction, since tastes differ very materially; but with the large number of varieties now before the public, no one need be troubled in making a selection unless it be because there are so *many* from which to select.

Taking it all in all the potato crop is not a bad crop to raise.

WILLIAM H. YEOMANS,
Columbia, Conn.

THE

# MARYLAND FARMER,

A STANDARD MAGAZINE.

DEVOTED TO

Agriculture, Horticulture & Rural Economy.

EZRA WHITMAN,

Proprietor and Editor.

COL .W. W. W. BOWIE, Associate Editor.

141 West Pratt Street,

BALTIMORE.

BALTIMORE MAY 1, 1878.

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TO POSTMASTERS—You will see that the subscription price of the MARYLAND FARMER is $1.50 per year; but you will be allowed a commission of 50 cents on each subscriber that you will send us; that is, send us $1.00 and keep 50 cents on each.

☞Now is the time to subscribe and advertise, when the year is young, and when we are sending out hundreds of specimen numbers of our journal, that it may make its acquaintance with new, and, we hope, be welcomed by old subscribers and advertisers.

FIFTEENTH VOLUME OF

## THE MARYLAND FARMER

This is the fifth number of the 15th volume of THE MARYLAND FARMER; and we claim it has been published longer continuously, without cessation, by the same publisher, than any other farmer's journal in this or other States south of Philadelphia.

A *popular* magazine,—as attested by our subscription list, frequent kind letters from parties, and the notices of our brethren of the press in this and other Southern States,—and is also a *great advertising medium*, as shown by the numerous new advertisements in the present number.

During the present year, we shall allow nothing to prevent our making it superior to all former issues, and maintain beyond dispute its high character.

Its aim will be to admit nothing in its colums like Theory, unless based on science controlled by reason; nor anything called Practical, unless proved by successful experiments.

If our old subscribers will do us the favor to canvas for THE MARYLAND FARMER, by showing it to their neighbors and soliciting the subscriptions, they will confer a great favor on us, and we do not doubt, confer a greater profit on the new subscriber.

## MAKE UP CLUBS.

To Clubs of five or more, with pay in advance, we will supply THE MARYLAND FARMER at $1.00 each, per year.

Those who will send us $2.50, during this month, shall receive two copies for the year.

Any one who will send us six dollars for six subscribers, shall receive a seventh copy for getting up the club.

These terms enable persons to get the Magazine at $1,00 per year, postage paid.

YOUNG MEN!

It is an easy way to make money by getting subscribers for THE MARYLAND FARMER. Send 15 cents for Specimen Copies, and ascertain what Liberal Commissions we will allow.

ADVERTISERS.—While we are gratified to perceive from the large number of advertisements in the MARYLAND FARMER—increased monthly—that our journal is appreciated as a profitable medium, yet we are surprised that Farmers who have stock of all kinds for sale do not advertise more freely; merchants properly estimate the value of advertisements, while farmers lose hundreds of dollars by not doing as the merchants do. We have daily enquiries where poultry, eggs, sheep, cattle, horses, &c. are to be had, and at what price. We can not answer in all cases. It is true we have an agency ourselves for the purchase of such articles, but we would have our patrons deal personally with the owners, who advertise.

## Maryland Jockey Club.

This popular club, is now enjoying unusual financial prosperity, and in accord with its well-known liberality, is expending its means, under the direction of its accomplished Secretary, Major J. D. Ferguson, in making great improvements, for the comfort of those who visit their meetings. These improvements will contribute largely to the pleasure of every class of society who desire to participate in the exciting scenes of this noble and praiseworthy sport.

There are many good people who object to horse-racing solely on the ground of its tendency to gambling, while they attend cattle-shows and many other exhibitions where every sort of gambling and games of chance are carried on, and in such small sums that the poor and the children even can be induced to risk their few pence, while on a first-class track like Pimlico, nothing of the sort is allowed, and betting is confined to those who have plenty to squander. Men will and do bet upon all the vicissitudes of life, from a *Raffle* at a Fair to support the Gospel and its behests, to the result of a Presidential Election.

We wish the Jockey Club success, and feel sure that the coming meeting this month will be more brilliantly successful than any heretofore held.—These meetings of the Maryland Jockey Club, and of the Agricultural Society bring thousands on thousands of dollars to Baltimore, and are left here by visitors from abroad, and hence both institutions should meet with hearty and substantial aid from the business men of the city.

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Our correspondent W. Altee Burpee, we find from his advertisement in this number of the MARYLAND FARMER, will in the future be disconnected with any other person or firm in his business. His store will in the future be 221 Church St., Philodelphia. We heartily wish him every success.

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## Maryland Horticultural Society Exhibition.

The April meeting and Exhibition of the Maryland Horticultural Society took place on the 24th ulto. at the Academy of Music. The number of exhibitors and spectators was encouragingly large and the display unusually fine for this season.—Among the fine collections were those of R. J. Holliday, R. W. L. Rasin, Captain Charles H. Snow, W. H. Perot, Ernest Hoen, James Pentland, A. L. Black and Cromwell & Congdon.

Want of space prevents our giving the long list of regular and special premiums, and the names of the recipients.

Special mention was made of S. Feast & Sons, for epiphylum feastii, which originated with Mr. John Feast, one of the oldest members of the society; R. J. Halliday, for general collection, and John S. Gilman, for two vases of foliage plants of great beauty.

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## Maryland Agricultural College.

The stockholders of the Maryland Agricultural College held their annual meeting at Guy's Hotel, Baltimore, on 10th April, and re-elected the board of trustees. Mr. Otho Williams was chairman of the meeting, and Mr. W. B. Morgan secretary.—The board of trustees consists of Messrs. Ezra Whitman, James T. Earle, Allen Dodge, J. F. Lee, Carroll Goldsborough, John Merryman and J. McHenry Howard. Some 4,900 shares were voted, and there was no opposition to the re-election of the board. The trustees will not reorganize until the June meeting. There are now sixty boarders at the college. The Legislature recently made the annual appropriation of $6,000 for the institution.

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ACKNOWLEDGEMENT.—We return our thanks to the Rev. Mr. Loomis of San Francisco, California, for the fine root of edible Sarsaparilla sent us.—We followed his directions in planting it, which were, to treat it as asparagus and give it the same culture. We shall also bear in mind at the proper time to try it as he directs,—"cut when young and tender, and eaten as salad, or cooked as asparagus." Both ways we shall try, and give our experience to our readers. How delectable to dine upon Sarsaparilla, our own growing, instead of paying tribute to the apothecary or the sarsaparilla—pop venders! What strange relations plants have to each other—this edible and the medicinal sarsaparilla are of the same family, and near cousins to the tender smilax, so fashionable of late to adorn ladies ball-dresses.

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EGYPTIAN CORN AND TROPHY TOMATOES.—We were delighted to receive from that eminent horticulturist, Mr. Hyde of Boothby Hill, Harford County, a nice parcel of his improved Egyptian early corn, and package of his improved Red Trophy. We tested them last year when they attracted so much notice in Baltimore, and were so greatly esteemed that they brought three times the price that any other variety of corn or tomato that were offered in the market. Indeed they were not to had except by one or two hotels and wealthy epicures. This year he has put the seeds in the market, and the general public will no doubt reap the benefit.

THANKS.—We are indebted to Mr. Alexander M. Fulford of Bel-Air, Harford county, Maryland, for a large and elegant picture in a neat frame, for the adornment of our sanctum. The picture has a pretty back-ground with life-like and accurate portraits of his famous Berkshire, Imp, "*Queen of Linden*" and Imp, "*Compton*"—both recipients of the highest premiums in England and America.—They are really splendid hogs and the artist has done himself great credit by making a beautiful drawing, yet in no way flattering his subjects. for we have seen the animals twice at different exhibitions, and admired their symetry and beauty of form. Mr. Fulford has a large number of Berkshires of the best families, and from his piggery our State and the South can be supplied with the best of the Berkshire family of hogs. It will be a blessing to farmers, and to the lovers of choice bacon, when the day arrives that improved breeds of swine will *root* out the land-pike, that eat more than they are worth and destroy more than they eat. A ham from a properly fed Berkshire year old pig, and cured in best Maryland style, would tempt a Jew to forswear the laws of his fathers.

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THE PARKER POULTRY ASSOCIATION of Parker City, Armstrong county, Pa., will hold its next meeting in that place, 20th December, and close on the 25th. Heretofore it has been very successful, and having a surplus fund in hand to enlarge premium lists, it no doubt—will this year be more successful than ever. President James M. Lambing, other officers and directors Jas, L. Lambing, James R. Goldsboreugh, John S. Shearer, John A. Lambing, J. M. Nolan.

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STATE AGRICULTURAL SOCIETY.—At a meeting of the the Officers of this Society, held at the Rooms of the Society, 34 North Charles Street, Baltimore. J. Merryman, Esq., President in the Chair, and T. B. Dorsey, Esq., Secretary. It was determined to change the time of meeting from October, to 24th September. This was done we heard, to avoid conflicting with the meeting of the York, Pa., Society, and to suit the Eastern Shore farmers, who could not leave their wheat-sowing in October. By this arrangement we hope, and it is believed a large attendance of our brothers of the plow from genial Eastern Shore, will be secured, and that much fine stock, &c. will be exhited at Pimlico, before its presence at York the following week. It will also enable our Maryland Exhibitors to attend the York Association.

ADDENDA.—Prof. Warfield desires us to state the following facts, which he over-looked when writing, the history of the Maryland Agricultural College: "The price paid for the land $50 per acre; $8,000 were paid cash, and 880 shares of stock at $5 per share were granted. The balance was not paid till after the death of Mr. Calvert. Prof. Glover, entomologist of the Agricultural Department also held a chair in the College, at one time, and Mr. Wm. A. Stewart of Baltimore, when Speaker of the House of Delegates, took an active part in all discussions of the Board of Trustees."

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*For the Maryland Farmer.*

## A New Horticultural Society.

*Editors Farmer.* — After several preliminary meetings to consider a basis of organization, and for the adoption of a Constitution and Rules, a goodly number of our amateur and professional horticulturist met in this City, on April 19th, and completed the organization of the "District of Columbia Horticultural Society," by electing the following named gentlemen as officers for the ensuing year:

Wm. Saunders, occupying the Chair, and J. T. C. Clark, acting as Secretary of the meeting; John A. Baker, President; John Saul, Thos. W. Fowler and Edwin Cammack, Vice-Presidents; C. A. Ball, Recording Secretary; D. S. Curtiss, Corresponding Secretary; J. T. C. Clark, Treasurer; Ex-Com, John Saul, D. J. Saunders, Geo. Glorius, Michel Esch and J. G. Judd, with the President, Secretaries and Treasurer, as *ex-officio* members of the Committee; Wm. Saunders, Mat. Hagerty, J. K. Kerr, elected a Committee on Finance.

On invitation, remarks on the good of the Society and its objects, were made by Messrs. Saunders, Saul, Curtiss Clark and others. Time of regular monthly meeting, second Wednesday evening of each month.

All persons, in all sections of our country, interested in horticultural improvements are cordially invited to attend our meetings, and become members of the Society.

POTOMAC.

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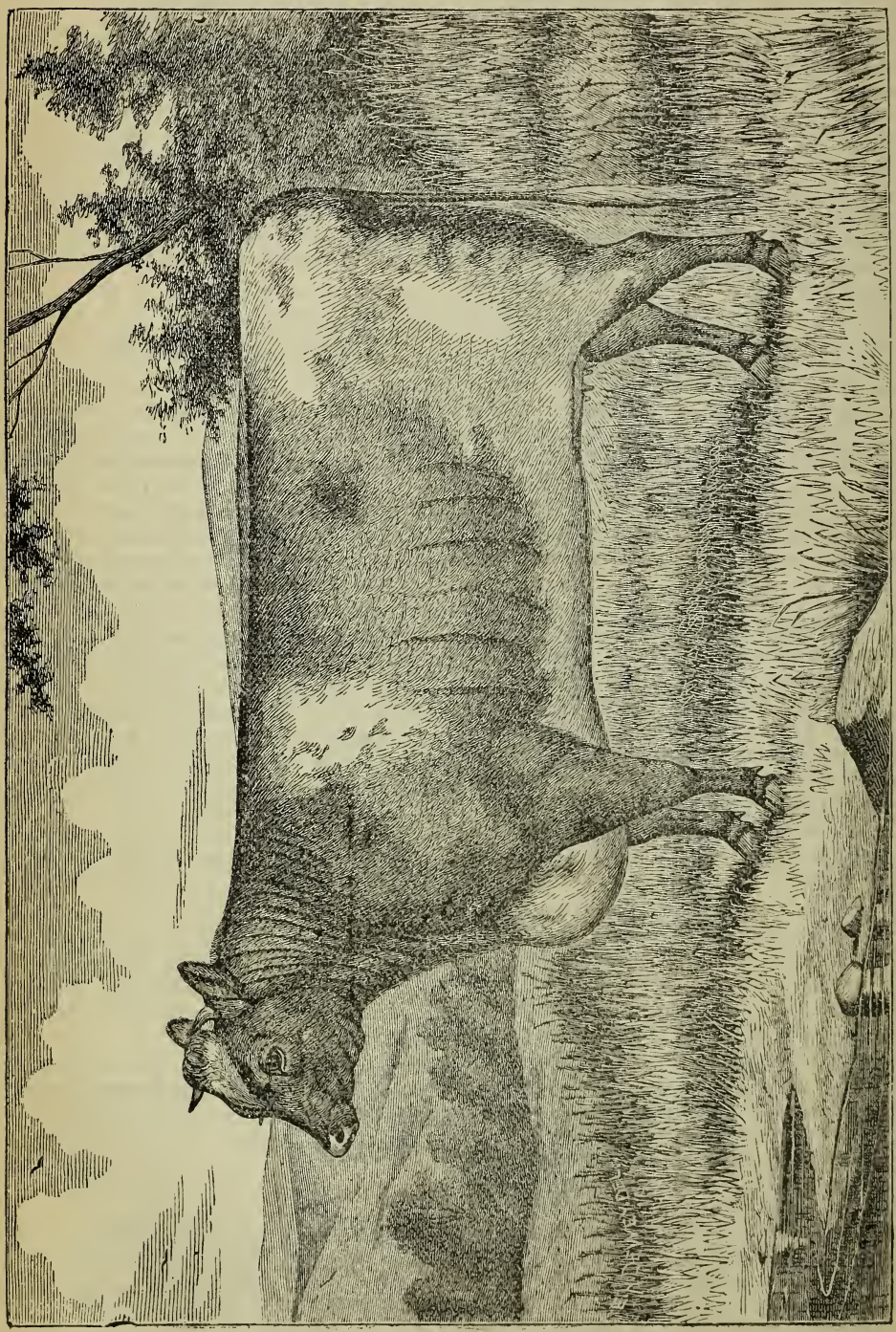
CORRECTION.—The excellent article on "Apple Orchards," in the April number of the MARYLAND FARMER, through mistake, was not credited, as it should have been, to our esteemed, contributor, D. Z. Evans, Jr., Esq.



IMPORTED SHORT-HORN COW, SILVER LADY. Property of H. N. MOORE, Red Oak, Iowa.

## SHEEP HUSBANDRY.

Adaptability of soil, climate and natural products point to sheep raising as a most profitable employment for the New England and New York farmer. Capital in sheep can be turned much quicker than in cattle; they pasture better, they thrive where most animals would starve; they will soon clear a field of weeds, briers and bushes, and there are hundreds of acres of unavailable pastures that may be vastly improved by flocks of sheep.

No other branch of farming presents three sources of cash income so certain to follow judicious management as sheep raising, in its early lambs, yearly clip of wool and growth of mutton. It is useless for the small farmer to expect a satisfactory return from the rearing and feeding of inferior sheep, whose keep costs as much as that of the improved breeds and whose products fall far behind. Without making large outlays in the selection of a flock, the average farmer may improve upon his present sheep. but he must abandon the suicidal policy of parting each season with his best ewes or lambs, ince to no one are such sheep worth more than to the farmer who rears them, for these animals lose by change of location and no way do they thrive so well as in their accustomed haunts.

By continued selection of the best ewe lambs and the employment of some thoroughbred buck, which it is the interest of every intelligent and thrifty sheep raiser to secure, a flock may soon be reared that will give double the net profit now gained from inferior sheep. These animals must be so treated as to insure rapid and uninterrupted progress, any serious check to their growth involves at once a loss of time and a waste of food. Sheep nutritiously fed will make one and three-quarters per cent, of the weight of food in live weight, while steers will not make one per cent., and, although it is true that pigs produce still more flesh than sheep, yet they require a more expensive diet.

The discomfort and privation which often ensue to a flock from long-continued rains, cold storms, snow and sleet, and which might be obviated by proper attention to shelter and warmth, are certain to be attended with a loss of mutton and with an impaired quality and diminished weight of wool. This is a business that requries close attention to details, and small flocks, well selected and kept under the watchful eye of the owner, almost invariably produce the best return of any live stock on the farm. Our city markets are poorly supplied with good mutton, which always commands remunerative prices, the extra lots bringing fully as much as the best beef, while the cost of production is far less. The fresh-meat trade with Great Britain has also developed the fact that we can raise and sell choice mutton there with the certainty of good results.

When all the conditions of successful sheep husbandry are complied with there is no department of farming from which may be derived so much profit and pleasure combined as the rearing of a flock of sheep, and it is to be hoped that every farmer who has been negligent on this point will give so important a subject his careful attention and wisely determine to include this branch in the economy of his farming operations.—*American Stock Journal.*

# THE DAIRY.

## Record of a Famous Cow.

We find in our valued exchange—the Maine Farmer, the following from its correspondent G. M. T. in reference to the valuable milking qualities of a cow belonging to Mr. Ezra Totman of Fairfield, Maine—Mr. Totman is an old friend ot ours, and the Proprietor of the Fairfields Mills, and we can vouch for his high standing in his State and his undoubted veracity and integrity.—*Eds of Md. Farmer.*

The cow dropped her calf Feb. 23d, 1877, but no record was kept of the milk until the calf was removed March 23d. Then the record is given from that time to January 31st, 1878, which we omit but the writer goes on to state.

"During one week in January 33 quarts of milk were sold, six lbs. of butter made and the family of six persons supplied with milk. As a summing up of the yield we find that from March 23d, 1877 to Jan. 31st, 1878, ten months and seven days, Mr. Totman sold from this cow 1750 quarts of milk and made 300 lbs. butter, besides supplying the family of six with all milk used or drank. This would give as the amount of butter made for the *entire* time— 380 days—a small fraction less than one pound per day, and of milk *sold*, a small fraction less than six quarts per day.

Those of your readers who keep cows will judge readily how much milk a family of six would daily consume. The feed during the spring and until June was good hay and from six to eight quarts of shorts daily; during the month of June no feed was given except what she got in a good pasture; from July 1st until housing time a small quantity of shorts were fed, the amount being increased until she was taken from pasture, since which time she has been fed one peck of shorts and three quarts of potatoes daily with what good hay she wanted. The cow dropped a fine heifer calf Feb. 18th, which, having been weaned, is now for sale. At present the cow is giving from 12 to 13 quarts daily. I have been particular to obtain and copy this record as it indicates a remarkable yield and having been accurately kept is correct. Mr. Totman says if auy one can show a better record for the year he would like to see the figures."

## THE EAR MARK OF BUTTER COWS.

Hon. John Shattuck, a noted butter dairyman of Chenango county, N. Y., said at a convention of the New York State Dairymen's Association that he had found the color on the inside the ear to be an infallible guide in the selection of a good butter cow. If the skin on the inside the ear is of a rich yellow color, the cow was sure to give a good quantity of milk; that is, rich in butter. He said in all his experience he had never known this sign to fail.

## BUTTER.

Prof. L. B. Arnold writes so the New York *Tribune*, of butter:

Of the great mass of butter which finds its way into the general market and is reckoned as "good," the first and most obvious defect is an old taste, derived probably from too much or too long exposure of the cream to the air before churning. Everybody understands the fact that butter exposed to the air soon acquires an old and disagreeable taste; but everybody does not seem to appreciate the fact that cream deteriorates the same as butter, by standing open to the air. But it certainly does so, and very much more rapidly than butter, and especially if exposed to the air which is warm or which contains any bad oders or vapors. Owing to the nitrogenous matter mingled with cream it is very susceptible to change. Exposed to warm and damp air, cream will decay about as much in a day as butter would in a week in the same situation. It is therefore very easy, and certainly very common, for butter to acquire an old taste by too much exposure of the cream before churning. The surface of the cream which is exposed to the atmosphere, especially to a faulty atmosphere, is all the time changing and working toward decay while standing for the slower particles to get up and ready for the skimmer. The longer this exposure continues the greater is the change and the more is the flavor of the resulting butter affected. It is one of the striking advantages of the more modern modes of raising cream, that they bring it to the surface quickly and improve the butter by shortening the exposure of the cream to atmospher ic influences. The cleanest flavored butter—that which has the fullest, freshest and most delicious taste, and the best keeping quality—is now made by heating the milk to expel objectionable odors, and then, under an air-tight covering, lowering the temperature to hasten the ascent of the cream. If cream must be exposed to the air while rising, it will do very much toward avoiding the old taste so often found in butter, to have the air in contact with the cream as cool as possible. Cold retards change, and the cooler the surface is kept the less progress toward decay. The cooler air now sought in modern creameries makes a marked improvement in their butter over those which have cold water but warm air in their rooms for setting milk.

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—London consumers pay more than $17,500,000 per annum for milk.

# OUR LETTER BOX.

*For the Maryland Farmer.*

### Russian Cake.

*Messrs. Editors:*—I send you a receipt for a light and nice cake for lunch or tea, and I think it will recommend itself to your readers for its cheapness and the easy way it can be prepared and baked.

"Take three fresh eggs, beat very light, sift over them nearly one pound of flour, leaving a little to sprinkle the pastry board. Before sifting, put in the flour, one teaspoonful of salt, two of yeast powder, and a half a pound of light brown or coffee sugar. When all is sifted upon the the eggs, before stirring together put in two small table spoons of lard, and grate half of one nutmeg. Mix well, put on a pastry board well covered with flour, roll several times until thin; cut with a cake cutter; bake in a quick oven, and either serve hot or eat cold."

It is a recipe of my own discovery, and I have named it *Russian Cake*, after the late conquerors. Ask some of your lady readers to please try it and let you know how they like it.

Yours most respectfully,

GERANIUM.

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### The Wild Silkworm.

TAYLOR'S ISLAND, APRIL 15TH, 1878.

*Editors of Maryland Farmer:*—I send you a specimen fly. Although I have noticed its habits for some time am unable to determine whether it is a friend or foe; but I am satisfied it belongs to the "night class" Having found a number among my fruit trees, and having heard my neighbors speak about them also, I would be glad if you would tell us through your valuable work whether it is injurious or innocent. I think we were "frightened before we were hurt," about our fruit, there will be plenty of peaches of good quality and without disaster, a heavy crop of apples and pears. Yours truly,

E. L. GRIFFITH.

[We sent the remarkably pretty insect to the Department of Agriculture at Washington, desiring to know its name, habits and entomological classification, and promptly received from the Hon. Mr. Le Duc, Commissioner, the following reply:

"The moth enclosed is the female of one of our wild silkworms—attacus cecropia.—You will find a full illustrated account of it in the 4th Missouri Entomological Report for 1871, p. p. 103-12."

[From this we infer that no great harm is to be apprehended from it appearance in Maryland. We may possibly again refer to it. We are at all times glad to have our friends send us any unusual insects, birds, or vegetable growths that may be to them unknown, that we may investigate and give all the information in our power.]

*For the Maryland Farmer.*

## Packing Eggs.

I notice on page 135 of the MARYLAND FARMER, that my method of packing is condemed by W. S. Temple, of 47 S. Howard Street, Baltimore, Md. Now, no one doubts that a resinous and reliable substance exudes from green trees or wood, but I guess no one would think of using green saw dust as it is damp. Perhaps I should have said dry dust. However, I doubt if even green saw dust would go so far as to kill the germ of an egg in shipping; but dry, I am certain, would not. I have tried it as often, perhaps, as our friend from 47 S. Howard Street, has in any other way whatever. I have shipped many hundred miles and never had complaint as to *killed eggs*. Every one knows that understands the hatching of eggs that often there are some that will not hatch; some again that will partly develop and go no further, not being properly fertilized; but that any gets "poisoned" by saw dust, except it be a certain kind, is the rankest folly. I know that certain trees or wood contain no poison, rather nutriment. Now, W. S. T. informs us that particular trees or wood contain such powerful volatile poisonous matter, that being around an egg a few hours or days as the case may be, in the most even temperature possible attainable, that it would penetrate to such an extent as to kill the germ. Such information would be very profitable indeed, if properly explained.

I don't claim to be a chemist, but do claim to understand some principles (at least the first) of packing and shipping eggs. No one acquainted,doubts the existence of an air sack in every egg, and our might have added some have two, as I now have one in my hand, a choice Pekin that has. No doubt exists either as to pores in the shell; but one of the great principles is even temperature, and this we have to the greatest perfection in nice dry saw dust, especialiy if fine. However, if W. S. T., or any breeder or shipper wishes to try the experiment, I will ship with him eggs of the same variety, same in every respect, except packing—to any part of this land—1, 5, 10, or more hundreds of miles, and report results in MARYLAND FARMER. This challenge is open for no limited period, I claim my *birds are pure blood*, and that my eggs are packed to hatch, will and do hatch every time, if shipped to *Maine* or *Oregon*, though I do not charge $3.00 for 13. *Furthermore, I do the mating of my birds and breeding them myself.*

A. W. FRIZZELL, Balto. Co., Md.

[Mr. F. sent us, with his letter, the following postal as evidence that saw dust does not injure eggs, he having packed the eggs, referred to, in saw dust.]

MONTGOMERY, ALABAMA, June, 1877.

*A. W. Frizzell, Esq., Pikesville, Md.*—The eggs you sent me came. One egg was broken in the box; four eggs were broken by the hen after she had set on them four or five days. I took the eggs that remained, washed them in tepid water and put them under a smaller hen; she hatched nine chicks. One egg was rotten. They are fine lively chickens. I am delighted with them.

W. R. JONES.

*Tomatoes and Early Corn.*—An esteemed friend writes us from Annapolis, that he will try the "Hyde Improved Egyptian Corn" and the "Hyde Improved Red Trophy" and the "Golden Trophy," originated by Mr. Hyde of Boothly Hill, Maryland. "But" he says, "I believe and I speak after trial of several varieties, that the 'Minnesota' is the very best corn, and 'Hathaways Excelsior' the best tomato grown for the table use." How tastes and views differ in horticultural matters?—differ as in most affairs! Experiments with the different fruits and vegetables on different kinds of soils and in various localities can alone satisfy each grower as to the particular kind that suits him.

## FRUIT TREES.

*Union Point, Ga.*

*Messrs. Editors:*— * * * * This autumn I shall want a few trees of the Japan Persimmon or Date Plum. I am trying to raise fruit, but my pears suffer from blight badly. P. W. P.

[If our correspondent would read an essay upon Pear Blight, by Dr. Brainerd, published in the November number of the MARYLAND FARMER for 1876, he would get much information of great use to him in regard to this too commonly fatal disease with pear trees. In this essay, it is asserted that the blight is caused wholly by excessive solar heat. They should be planted on a North-east slope of land, in a deep loaming soil with under drainage, while abundant moisture, but not an excess, is to be preferred. This learned pomologist says "the remedy for this great evil, must be

sought, not in external application to the injured parts, nor even by excision, but by planting in suitable soil and in situations that will afford protection from the devouring heat." We say, let the limbs grow low to the ground to protect by the shade of its foliage the main stem.]—EDS. MD. FAR.

MUSHROOMS.—W. B. J., Balto., Md., wishes to know what will be the cost to make a bed and fill it with spawn mushrooms, say 10 by 20 feet, and how to make it, &c.? Will some one of our readers kindly inform us, giving full partiulars?

BALTO., APRIL 10TH, 1878.

*Editors of Maryland Farmer:*—"*The Sunday Afternoon*," Springfield, Mass, is emphatically a household magazine—each member will welcome it as a personal friend who will help to while away the long afternoons of the Sabbath. It is ably conducted in each department,—containing something of interest for old and young. It fills a vacancy long felt in families where secular reading is disapproved, on the Lords day. There is nothing in it that the strictest Puritan can take exception to, yet it is not dull or humdrum. Old truths are put into such novel and fascinating dress, that one can hardly recognize them. The names of its contributors should give it entrance to all homes, even though the magazine has not been seen or read previously. Your lady friend, W. W. W.

BALTIMORE, APRIL 25, 1878.

*Editors af the Md. Far.*—I inclose a clipping from the Farmer's Cabinet, Amherst, New Hampshire of the 16th May 1873—It may be of interest to some of your readers who note the seasons as they come and go. The year 1816 would show that a mild winter was no assurance of a summer favorable to the agriculturists.

Respectfully yours,

J. R. Ward.

## A Year Without a Summer.

Almost every one has heard tell of the terrible dark year in the earlier part of the present century, which old New England farmers refer to as "eighteen hundred and starved to death." A contributor gives the following information.—

While every one is speaking of the present season as being remarkable in its characteristics, I have gathered for your readers some reliable facts of the year 1816, known as the "year without a summer." Few persons now living can recollect it: but it was the coldest ever known throughout Europe and America. The following is a brief abstract of the weather during the year:—

January was mild so much as to render fires almost needless in parlors. December previous was very cold.

February was not very cold; with the exception of a few days it was mild, like its predecessor.

March was cold and boisterous during the first part of it; the remainder was mild. A great freshet on the Ohio and Kentucky rivers caused great loss of property.

April began warm, but grew colder as the month advanced, and ended in snow and ice, with a temperature more like winter than spring.

May was more remarkable for frowns than smiles. Buds and flowers were frozen, ice formed half an inch thick, corn was killed, and the fields were again and again planted until deemed too late.

June was the coldest ever known in this latitude. Frost, ice and snow were common, Almost every green thing was killed. Fruit was nearly all destroyed. Snow fell to the depth of ten inches in Vermont, seven in Maine and three in Central New York, and also in Massachusetts. Considerable damage was done at New Orleans in consequence of the rapid rise in the river; the suburbs were covered wiih water, and the roads were only passable in boats.

July was accompained by frost and ice. On the 5th ice was formed of the thickness of common window glass throughout New England, New York, and some parts of Pennsylvania. Indian corn was nearly all destroyed; some favorably situated fields escaped. This was true of some of the hill farms of Massachusetts.

August was more cheerless if possible than the summer months already passed. Ice was formed half an inch thick. Indian corn was so frozen that the greater part was cut down and dried for fodder. Almost every green thing was destroyed both in this country and Europe. Papers received from England stated that it would be remembered by the present generation that the year 1816 was a year in which there was no summer. Very little corn ripened in New England and the Middle States. Farmers supplied themselves from the corn produced in 1815 for the seed of the spring of 1817. It sold at from $4 to $5 per bushel.

September furnished about two weeks of the mildest weather of the season. Soon after the middle it became very cold and frosty, and ice formed a quarter of an inch thick.

October produced more than its share of cold weather; frost and ice particularly.

November was cold and blustering. Enough snow fell to make good sleighing.

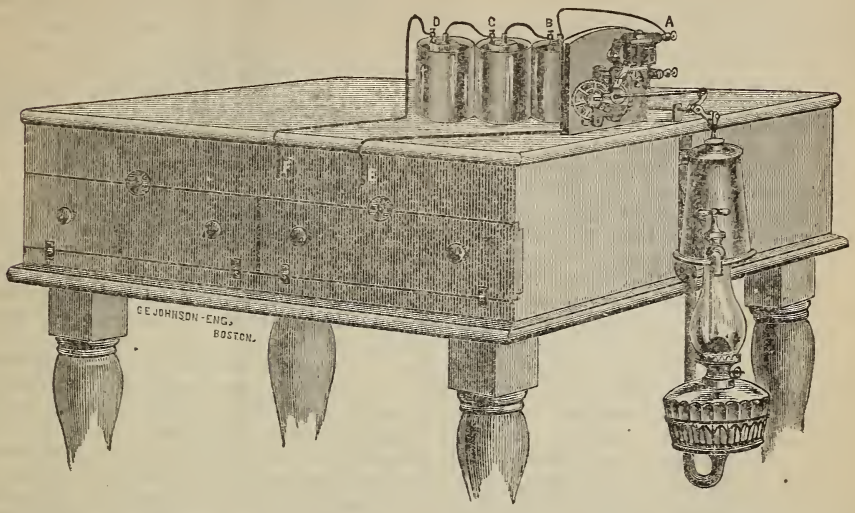
December was quite mild and comfortable.

The above is a brief summary of the "cold summer of 1816," as it was called in order to distinguish it from *the* cold season. The winter was mild. Frost and ice were common in every month of the year. Very little vegetation matured in the Eastern and Middle States, The sun's rays seemed to be destitute of heat through the summer; all nature seemed to be clad in a sable hue, and men exhibited no little anxiety concerning the future of this life.

The average wholesale price of flour during that year in the Philadelphia market was thirteen dollars per barrel. The average price of wheat in England was ninety seven shillings per quarter.

# POULTRY HOUSE.

## THE ECLIPSE SELF-REGULATING INCUBATOR.




Artificial incubation is now attracting a great deal of attention, both in this country and abroad, and many are the machines for sale by which the hatching of large numbers of chickens may be brought about.

Some of the incubators are marvels of ingenuity and scientific skill, and the time is not far distant, probably, when the use of them will be as common as is now the use of the Sowing Machine and Mowing Machine on the farm, or the Sewing Machine and Washing Maching in the farmers' house.

The Eclipse Incubator is manufactured by Mr. E. A. Samuels of Waltham, Mass. In describing it he says:

The heat, radiated from a tank which is so contrived that there is a uniform circulation of hot water through it, is applied to the *top* of the eggs, these are placed in drawers, the bottoms of which consist of wire-netting; and beneath the drawers is a series of ventilating-pipes, which conduct to the *bottom* of the eggs a full supply of cool, damp air. This system of ventilating the eggs is entirely new; and I have applied for a patent on it to secure it, the device having been pronounced patentable.

The proper ventilation of the eggs has heretofore been over-looked by nearly all manufacturers of incubators, yet it is absolutely necessary for the successful hatching of the chickens. I have examined many incubator of different make, and in none of them is prope ventilation provided. It is well known that the minute blood-vessels, which spread out on the inside of the egg-shell during incubation, are continually imbibing the oxygen of the air for the purifying of the blood. We can easily see that while ten or twenty embryos may not consume a large amount of oxygen, three hundred would, and consequently it must be provided for them. But, while the embryos consume the oxygen of the air in the incubator, they evolve carbonic acid gas, which is poisonous to the blood if inhaled. It is evident that it must remain at the bottom of the incubator (being the heaviest gas) unless some provision is made for its escape; and then it renders the oxidization of the blood of the embryos an impossibility, they being literally poisoned by inhaling this poisonous gas.

In the system of ventilation that I have invented, the carbonic-acid gas falls into the ventilating-pipes (precisely as water falls into the tiles in a system of drainage), and is carried off out of the incubator; it is replaced by cool atmospheric air, which passes over cold water, and thus becomes in a measure moisture-laden.

The heat is furnished to the water in the tank by a kerosene-oil lamp, which consumes only about a quart of oil in twenty-four hours, while the lamps of some incubators use over a gallon of oil in the same time. The lamp burns beneath a small boiler which connects

with the tank, as illustrated in the cut of incubator on the preceding page.

The heat is kept at a certain point by the operation of a small electric battery, which is furnished complete with each incubator. As already described, the action of the pyrometer in the egg-drawers automatically sets the electric apparatus in operation; and every one knows how quick the action of electricity is. The moment the heat reaches a certain point to which the pyrometer is set by the operator, the electric force causes a large valve or ventilator in the machine to fly open; this permits enough of the hot air to escape to cool off the incubator a degree or two, when the valve closes again. I would state here that the system of bottom ventilation that I have introduced necessitates a radical change in the management of the incubator; for while in the old form the moisture furnished was adequate for the wants of the embryos, without there being any necessity for sprinkling or turning the eggs, the increased supply of atmospheric air supplied by the ventilating-pipes calls for more moisture than ordinary evaporation can give, and this must be supplied by sprinkling them from a small watering-pot.

A great many persons have expressed a doubt as to the facility with which they could manage an electric-regulated incubator; and, to my own knowledge, some have refrained from buying because they feared that the apparatus might be too complicated, and would "require the services of an electrician to set it up." This is utterly absurd. The battery that I furnish with each machine is one of the simplest manufactured; and any one who has brains enough to hitch three wires together when the manner in which they are united is described and illustrated fully in the instructions sent out; to put a handful or two of lumps of sulphate of copper in a jar, and add two or three quarts of water, is intelligent enough to set up one of my batteries; and any one who has not sufficient intelligence to do this can never succeed with any kind of an incubator.

As for the care of the battery after it is set up, all that is necessary is to once a week add a little water to the jar, drop a few lumps of the sulphate of copper (which resembles rock-salt, but is blue in color) into the water, and scrape with a knife or any piece of metal the rust off the zinc slugs in the battery. This is absolutely all the care required in running the battery; and the whole would require perhaps five minutes once in a week or ten days.

A REGULATOR WITHOUT ELECTRICITY.

I will say here, however, that I can put into one of my incubators, if desired by the party ordering it, a thermostatic bar to regulate the heat, very similar in principle to those used in some of the other incubators. The idea is an old one, and any one can use it; but I use in my own practice the electric battery, for the reason that with fair usage it always furnishes a prompt, quick, and reliable agent.

The battery never fails to respond to any call made upon it, provided it is supplied with a gill of cold water once a week, together with a handful of sulphate of copper, which can be obtained of any druggist for 15 to 20 cents a pound.

The price of the Eclipse Self-Regulating Incubator is $60.00, for a machine that will hold three hundred eggs. The machine is cased in a wooden case, grained in imitation of chestnut or walnut. This price includes every thing except packing, $2.50. Those who prefer a galvanized-iron case will be supplied for $80.00. On some accounts an iron case is preferable to a wooden one; but it is for customers to decide whether they prefer it to the extent of the difference in the price. In all instances, whether wooden or iron cases are furnished, they will be handsomely gotten up, and grained in imitation of oak or walnut. The above prices are for the incubators with either electric or thermostatic bar regulators as desired

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NOTE BY THE EDS. MARYLAND FARMER—We shall in our next number of Maryland Farmer give a description and cut of an "Artificial Mother." With these two machines, an opportunity will be afforded to ladies and gentlemen to raise their own chickens without the trouble and bother of keeping poultry all the year round. All they will have to do is to get the "Incubator" and "Artificial Mother," at a cost of say $75 or $80, and secure from some reliable poultry raisers 300 eggs, and in one room of the house in 21 days they will have an extensive stock of young birds, which at three months old, will be worth more than first cost of machines, eggs, &c. Then another brood from the setting of 300 eggs at intervals of 21 or 20 days will produce a pretty little revenue for some intelligent little boy or girl, requiring the use of only one room, and a small yard with proper, yet, cheap shelters and little fixtures for food, water, coarse sand, and ash-boxes, &c. This way of raising chickens will be as interesting, as cheap, and as profitable as growing, and feeding silk-worms and spinning silk, and requiring less time and demanding less skill and judgment. All the inconvenience of having old hens about the small premises of a town house, will be avoided and an instructive amusement for a few months in the year will be afforded to sometimes an invalided child, with a pecuniary reward far exceeding the trifling labor incurred. The very amusing engagement of mind and time of one, housebound for a season, and yet able to take care of these wonderful life producing and life protecting implements would well repay in the occupation, of otherwise wearying hours.

*For the Maryland Farmer.*

## WATER FOWLS FOR FARMERS.

No. 2 Ducks.

Although ducks are more generally raised than geese, yet they but seldom receive the attention hey deserve as profitable farm stock. How often on a well regulated farm we will see the good house-wife caring for 50 to 75 chickens, and making a good penny out of them too—more than enough for button money—and yet having no ducks, or if any, only one or two; why is this? There are several reasons for this, none of which are substantial—the women on a farm generally object to ducks, on account of the annoyance caused by them around the house, and the men say, they are always crying, "corn, corn," and will "eat their heads off." It is a well established fact, that ducks often lay more eggs in a year than hens, and these eggs are much larger, richer, more valuable, and contain less waste. For table poultry none can excel a good duck, and they always will command good prices.

In Aylesbury, England, the home of the famous Aylesbury duck, tens of thousands of ducks are annually raised—giving the entire maintenance of many a cottager's family. It is there calculate dthat a pair of ducks at eight weeks old of four pounds weight, cost four shillings the pair to produce, while in the London market, they command a ready sale, at from seventeen to nineteen shillings the pair.

Ducks can be very easily raised, the eggs can be set under hens, and one hen will mother forty to fifty ducklings. They thrive with the same care as fowls; but if intended for market will well repay liberal feeding. They are first-class foragers, and if they yielded not, other returns would nearly "be worth their salt," on account of the immense number of grubs and insects they destroy.

Our cut illustrates a pair of Pekin ducks, over which such a *furore* was created in 1873 and '74—a large and active demand still existing for them. When first discovered in China, they were thought to be geese. They are not really so large as they look, as like all Asiatic fowls, (Cochins and Brahmas) they have the loose fluffy feathers, peculiar to John Chinamans' fowl fancy. For profit and farm use, the farmer will find the Pekin, Roen and Aylesbury ducks all good breeds, of large size, early maturity, hardy and good layers—these breeds are the best, and will answer every purpose. Farmers whose poultry flocks have been depopulated by that dread unknown "*Cholera*" turn your attention more to ducks, as they are Cholera-Proof.

W. Atlee Burpee.

# THE APIARY.

## Bees and Honey in the South.

BY PAUL L. VIALLON.

### CHAPTER XIV.

**Artificial Comb Foundation**

During the last two or three years machines for making the Artificial Comb Foundation have been so greatly improved, that to-day, we can save a great deal of work to the bees, and increase our amount of honey and therefore our profits. The Comb Foundation consists of sheets of waxed rol led throngh a machine, which making indentations forms the foundation cells, and leave enough wax forthe bees to work out into combs, which are often more perfect than the natural combs. The foundation being made with about the same amount of wax as there is in the natural combs (they can be made very thin, but I don't think to any advantage), the bees will lengthen out the thick shallow cells, and probably have enough material left to cap them over when filled with honey. They will draw up the wax of these foundation into cells at a time when the amount of honey gathered, would not be enough to induce them to build combs in an empty frame, even if placed in the center of the brood nest.

By using the foundation in building up a colony, we prevent drone combs, as they are made five cells to the inch, the size of worker cells; and the bees will lengthen them of the same size right along. By putting a frame with a sheet of the foundation in the center of the brood nest, the bees will work on it at once, and we shall often have the Queen laying in it in twenty-four hours or less.

By using it in boxes, when we wish to obtain box honey, we shall often get a good crop when we should get but very little or none at all, by not using it, etc., etc.

We can have all the cappings and bits of wax accruing in the apiary from one source and another, made into Artificial Comb Foundation and given to the bees, instead of having them to build their own combs, and thus not only save some work to the bees and gain in the amount of surplus honey, but obtain combs perfectly straight in the frames

and faultless in their construction. Now this is a good advantage, as we are aware that bees do not gather wax as they do pollen and honey, but have to manufacture it at a great expense to themselves and their owner. I consider the Artificial Comb Foundation so great an advantage and such an increase to my profits, that I have all the wax accruing in my apiary, worked into them and do not allow my bees to build any natural combs so long as I have the foundation. The time saved to the bees by making them build combs early in the season, without consuming honey, by furnishing the comb foundation, is a gain sufficient to pay a good profit. In the month of July, when our first honey season ceases, I find a great advantage in making all the colonies, which do not have a full supply of combs, work the foundat on uninterruptedly until the fall season, at which time they will gather a fine crop, having the combs in which to store the honey.

The best way to fasten the foundation into the frames, is to have a board to fit nicely inside the frame and to nail strips on the edges of the board, so that it will go into the frame half way, lay the sheet of foundation on this board,and fasten it to the wooden guide of the frame, having the edge of the foundation to lay on the guide along the top bar of the frame, by pressing and running a smooth round piece of iron about one-quarter inch in diameter dipped in honey on the edge of the foundation right along the guide, in such a way that the foundation must adhere to the guide and top bar also. The sheet of Foundation shoufd be half an inch or more smaller than the frame, as if it fits too closely into the frame, the bees are apt to bulge it and we should not have straight combs. I have always found that I had better and straighter combs in my frames, when I had the sheets of Foundation one-half inch from the bottom and half inch from the sides of the frames.

The writer of this article will forward a sample of the Artificial Comb Foundation to any one sending ten cents for postage, etc., to his address at Bayou Goula.

## CHAPTER XV.

### THE ITALIAN BEE.

"The comparative advantage of the black or common bees and Italians, is a matter that no longer admits of discussions, and I must consider the very few individuals who write in favor of the former as belonging to that class of uufortunates, who seem to delight in being in opposition. If tons of honey are to be considered a proof, the matter has long ago been amicably settled in favor of the Italians. The bee moth need hardly be mentioned now, unless it is to advise you to drive them out with Italians,for whenever they come into a neighborhood, the moths get out without any further trouble or bother. This one feature alone, is enough to justify introducing Italian queens in place of the blacks."—*Gleanings in Bee Culture.*

The Italian bees were introduced into this country in 1860, The workers are somewhat larger than our common bees, and they differ by having the three first abdominal rings of a golden yellow. They have greater strength, enabling them to fly a longer distance in search of pasturage; they have longer tongues, which enable them to gather honey from flowers in which cells the black bee cannot reach, and therefore collect larger quantities. Their propensity to supersede their queen, when old or defective, is also an important advantage, as it lessens the liability of becoming queenless. The Italian queen is really beautiful—she is sometimes of a dark leather color, sometimes of a golden or orange color, with the extremity of her abdomen black.

Convinced of the superiority of the Italian bees I have made direct importations of queens from Italy, and intend to do so every year, so as to keep my bees in all their strength and purity.

I have found the Italian superior to the common bees in the following respects:

They are much more peaceable than the blacks when gathering, but in handling them in the time of scarcity, they are fully as cross as the blacks.

They gather much more honey than the black bees.

They are more prolific, and keep their brood more compactly in the combs than black queens.

In opening a hive, an Italian queen is much more readiiy found than a black one. I can find four Italian queens to one black one.

The Italians are far less disposed to rob; but if honey is left exposed, they are usually the first to find it.

They defend their hives against robbers, much more succcssfully than the black.

They protect their combs from the ravages of the bee moth much more effectually, the fact being that I have never had an Italian colony attacked or destroyed by the moths, etc.

I would recommend every one keeping bees to keep only the Italians, as they give better satisfaction in all respects.

## CHAPTER XVI.

### HOW TO ITALIANIZE AN APIARY.

To Italianize our apiary we must procure a pure Italian queen aud introduce her in place of one of our black queens, for from what has been said in

regard to the queen being the only one laying eggs and the only mother, when we change queens, we also change our bees, as in a few weeks after we have introduced an Italian queen in a hive of black bees, we have no more common bees in that hive. Now as soon as we have a pure Italian queen laying for a week, we can rear queens from her and change all our common queens for a young Italian.

As we have many black drones at the time of rearing these queens, we shall have the majority of our queens fertilized by them and consequently they will produce hybrid progeny. But as it is a known fact that the drone progeny is not affected by this fertilization, we repeat the operation next season, rearing queens only from our pure Italian mothers and change all the young queens whose progeny do not show the three-yellow bands; and if we have no common bees within a distance of two or three miles we shall have all our bees pure Italians, showing the three distinct yellow band on the upper part of their abdomen. If we have many colonies and we should wish to make artificial swarms, we should procure more than one queen so as to save time.—*Our Home Journal.*

## Farmers Stay Where You Are.

It has always been our sentiments that it was folly for young men to abandon farming and madness for old, settled farmers to quit their homes, and occupations to seek employment in cities, in business which is new to them. It is also unwise to move from one place to another, every "three remove, it is said, is equal to a fire"—and to go to the far West from the sea-board is to be like fish out of the water, or the hazardous leap "out of the frying-pan into the fire." All such as are so disposed, should read the following, from a correspondent in the *Tribune*—the very paper in which Horace Greely was all the time preaching, "Go West." But he meant that advice for the people of the cold, and hard-to-cultivate lands of New England, not those who are blessed with homes in the Middle States, where climate, soil, nearness to market, and all the benefits of refined civilization unite in making a *contented* people, happy and prosperous, if they will be economical, industrious and diversify their crops.

"My advice is, first make up your mind to stay. A man always ready to sell out amounts to nothing as a farmer. Consider, also, that others beside you have difficulties, and that you are too far advanced in life to begin a new business—you could not compete with those who already know the ropes. To work at day's labor is too much of a coming-down for a farmer of any dignity to think of. Manufacturing is already over-done; mechanics are far from prosperous; rum-selling is the most degrading business to which vagabonds ever sink: the mercantile business is very uncertain, has its horrors of unpaid bills and of protested notes, besides it is by many supposed to require a fluent faculty of attenuating the truth, which—your wife wouldn't like.—Doctors and lawyers live on others' calamities, and preachers, as a rule, get their pay only in the next world. So keep your eye on the main chance, and resolve to stay.

## DOMESTIC RECIPES.

Bleeding at the Nose.—A correspondent of the *Scientific American* says the best remedy for bleeding at the nose, as given by Dr. Gleason in one of his lectures, is a vigorous motion of the of the jaws, as if in the act of mastication. In the case of a child, a wad of paper should be placed in its mouth, and the child instructed to chew it hard. It is the motion of the jaws that stops the flow of blood. This remedy is so very simple that many will feel inclined to laugh at it, but it *has never been known ta fail in a single instance even in severe cases.*

Cement for Shoes.—Not seeing a reply to one of our correspondents' inquiries for formula of a cement for invisible patches on shoes, I send it, and will say it can be relied on.

Gutta percha, ½ oz.; bi-sulphuret carbon, 2 oz. In a wide mouth bottle put the two together, and shake occasionally until the gutta percha is dissolved, and it is ready for use.

*Directions.*—Where the patch is to be applied, scrape the boot or shoe until the blacking is off, and the leather is a little rough. On this dust with fine rosin, miautest quantity; serve the patch the same way. Then spread a little of the cement on both the shoe and the patch, first having shaved the edges of the patch. Apply like court plaster, and smooth with a warm spoon or iron, and the shoe will soon be ready to wear. A few hours will harden the cement. When properly done, the patch will be invisible, and will last as long as the shoe. This cement is water proof. The gutta percha, shaved to thin slices, is kept in India rubber stores for the above purpose. Ten cents' worth will do the work of a family for a long time. The bi-sulphuret of carbon is sold by druggists, and will cost five or ten cents an ounce.—The smell, which is offensive, soon passes off.—*Country Gentleman.* A. P. S.

Hominy Cake.—Add a spoonful of butter to two cupfuls of hominy (boiled an hour with milk) while it is still hot. Beat three eggs very light and add. Stir in one pint of milk, and lastly one pint of corn meal. Bake in a pan. Serve with a napkin under it on the plate.

University Night-Cap.—Take half a tumblerful of tea, with a wine-glassful of milk and sugar to taste, to which add a wine-glassful of brandy; beat one egg and mix.

Albany Punch.—One wine-glassful brandy, half wine glassful Jamaica rum, a tablespoonful arrack, quarter of a lemon, a tablespoonful sugar; then fill the tumbler with crushed ice and water, mix thoroughly, and drink through a straw,

## A Chat with the Ladies for March.

BY PATUXENT PLANTER.

MAY SONG FROM THE GERMAN.

"MAY, sweet May, again is come,
MAY, that frees the land from gloom;
Children, children, up, and see
All her stores of jollity!
On the laughing hedgerow's side
She hath spread her treasures wide;
She is in the greenwood shade,
Where the nightingale hath made
Every branch and every tree
Ring with her sweet melody;
Hill and dale are May's own treasures.
Youths, rejoice! In sportive measures
Sing ye! join the chorus gay!
Hail this merry, merry May!

Up, then children! we will go
Where the blooming roses grow;
In a joyful company
We the bursting flowers will see:
Up, your festal dress prepare!
Where gay hearts are meeting, there
May hath pleasures most inviting,
Heart and sight and ear delighting.
Listen to the bird's sweet song:
Hark! how soft it floats along!
Courtly dames, our pleasures share!
Never saw I, May so fair;
Therefore, dancing will we go.
Youths, rejoice! the flowerets blow!
Sing ye! join the chorus gay!
Hail this merry, merry May!"

Then let the young and old enjoy this sweet month of May,—when flowers are abundant—the grass growing for the refreshment of the dumb animals after their long winter's confinement to dry food; when the bees are humming, birds joyful in the work of building for the shelter of their forthcoming progeny; lambs skipping on the sunny slopes, colts gambolling, and young calves playing over the green fields; and all nature rejuvenated and buoyant with life, and full of promise of the current years' abundance and peaceful prosperity, insure those, who with grateful hearts to the beneficent Creator, will industriously embrace the opportunities offered, and unceasingly try to increase the "talents" committed to their keeping,—a bountiful return for their labor.

The flower borders and beds should be put in the best order possible, and enriched with well rotted manure from cow and horse stables, mixed with decomposed old turf or sifted woods-earth with a little bone-meal. Seeds of biennial or perennial flowers may be sown, bulbs planted, and the tender annuals and bedding plants forwarded in the house for setting out in May—portulacca and phlox seeds, &c., sown on the borders. All the shrubs neatly trimmed and tied to stakes or wire trellises. Climbers fastened to the walls or other supports.

Ladies, make your homes in the country pleasant and attractive with flowers. A small cottage without trees can be made agreeable to the eye by a few shrubs, plants and flowers, with creepers, ivies, morning glories, wistarias, clematis, Madeira vines, &c., covering the little porch, or forming rustic bowers—so cheaply and easily made with a few poles, barrel hoops and strong twine or wire. Here and there interspersing the delicate cypress,or the beautiful Carolina honey-suckle, or our common wild coral honey-suckle. The queen of the prairie or other prairie roses are quick growing, giving fine shade and are lovely objects when in bloom. The common hop vine is a home-plant, yet, rapid grower, very useful and odoriferous when in bloom, and affording a splendid shade for a rustic seat.

For more rare and lovely plants on the border or for window gardening in winter,I have, through the courtesy of Mr. Peter Henderson, an eminent florist, of New York city, the following handsome illustrations of new varieties of plants, to offer you.

GOLDEN TRICOLOR GERANIUM.

SCENTED GERANIUM—Mrs. Taylor

The tricolored geraniums are new and striking in appearance. It is difficult to describe the different leaf markings of these rare varieties—they are marked with yellow, crimson,scarlet and chocolate, so that their leaves in summer, are like the glorious autumn leaves of the forest. The sweet geranium—Mrs. Taylor—is a distinct variety, with strong fragrance of the rose odor; has large, deep scarlet flowers, almost constant in bloom. "It can not be surpassed as a pot plant for winter," says Mr. Henderson.

If you are fond of pinks—the sweetest of old time border plants—just get the the dianthus querteri—German pink—I like the common names myself. Here, it is well pictured.

This very pretty pink was imported six years ago, by Mr. P. Henderson, and it is yet scarce. He says few plants possess so many points of excellence; it grows to the height of 1 foot; flowers rich,purplish crimson, two inches in diameter, double and well formed; it blooms *without intermission from June to January*, and is very useful for boquets. We should think so,if it does do as Mr. H. says: and "he is an honorable man." It is clover-scented, and really a very valuable acquisition to our pink assortments in our little garden beds.

From so much talk about flowers,no doubt you are tired and in this enervating atmosphere of May, you feel feeble, and perhaps thirsty, therefore let us brew one or more of the following nice summer drinks that the scholars, writers, and temperance lecturers have concocted to supply the place of the good (?) old time restorative——odorous mint julep! Good bye! good old days, when a silver dollar was worth 10 dimes of pure coin.

Now try your hand on pleasant summer drinks.

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Claret Cup.—Six tablespoonfuls sherry, two tablespoonfuls brandy, one ounce and a-half sugar, a few shreds lemon peel; to these add one bottle claret and one bottle soda water. Keep in a cool place, and only open before drinking.

Harvard Drink.—Mix equal parts ale and soda water, and add sugar and a lemon.

Aleberry.—Boil ale with spice, sugar, and toasted bread. An excellent and agreeable remedy for a cold.

Hydromel.—Boil eight pints water and one pint good honey till reduced one-half; then add one glass brandy. This hydromel will keep 10 years.

Widow's Tears Liquer.—To 10 pounds of spirit (pale brandy), add four pounds of white sugar and four pints of water; then add four drams powdered cinnamon, 48 grains cloves, and the same quantity of mace; color with caromel.

Excelsior Bitters.—One ounce and a half of gentian root, one ounce and a-half each of lemon peel and orange peel; steep for a month in a quart of sherry, and then strain and bottle for use.

## IN MEMORIAM.

It is with deep sorrow we announce the death of of a most worthy and highly popular gentleman, devoted to the Agriculture and Horticulture of this country. Willard C. Flagg, died at his farm near Moro, Illinois, on Saturday, March 30th, 1878. The senior Editor of this Journal was acquainted with him for years and for some years past officially connected as officers of the National Agricultural Congress, and can truly bear witness to his remark able characteristics for integrity, truth, and honor; his love of justice and readiness at all times, manfully to combat error. He was zealous in all his undertakings and they were always for the good of his fellow man—He had a fertile brain, sound judgment and expressed his views with clearness and in an easy manner whether talking or writing. Only two days before his death, his sorrowing wife wrote us, at his dictation a long letter upon business of the Agricultural Congress. His letter was very hopeful and intimated that although he was then just attacked with influenza, he did not apprehend much trouble from it and expressed the hope that he would be able to visit us in Baltimore this Spring--Two days after, he had left the field of his hopes and honorable labors—We never were more shocked or impressed with the uncertainty of life than in this instance—We can only at present express our deep sympathy with his afflicted family and regret the great calamity his death entails upon the horticultural and agricultural interests of the whole country.

## Publications Received.

*The Fifteenth Report of the Directors of the Maryland Institution for the Instruction of the Blind.* This report is highly creditable to the officers and managers of this very laudable and charitable institution. Gentlemen of means and acquirements, devote much of their time to this highly meritorious enterprise. The results of this educational system are marvelous, and with what delight the afflicted receive this education can only be imagined by those gifted with good eye-sight, which conveys to the soul hourly so many rich scenes, and enjoyable features of nature and liv i g humanity. God speed this noble charity !

FROM THE COMMISSIONER OF AGRICULTURE OF GEORGIA. Analysis and Commercial Values of Commercial Fertilizers. made by Prof. Janes, up to the 18th, March, 1878. It is carefully prepared and of great value, to not only farmers of Georgia. but would be beneficial to other readers interested in such fertilizers, as are licensed to be sold in Georgia. The entire annual report of Commissioner Janes is instructive and interesting,

THE SUGAR BEET IN NORTH CAROLINA.—A Report by Professor A. K. Ledoux, Chemist, to the Department of Agriculture of North Carolina.—This Report is so interesting we shall make copious extracts from it soon.

NEW MUSIC.—"DRIFTING WITH THE TIDE."—Received this very pretty song from the publishers, W. L. Thompson & Co., East Liverpool, Ohio. It doubtless will surpass in popularity, William L. Thompson's other famous song, "Gathering Shells from the Sea-Shore."

VALUE AND CULTURE OF ROOTS FOR STOCK FEEDING, is the title of a valuable treatise upon this very important subject, at this time attracting much attention, written by the famous old seedmen and farmers, David Landreth & Sons; price 25 cents. We recommend it strongly to our readers, for careful perusal and hope that many will profit by its teaching. None who read it will fail to be convinced of the propriety of growing roots for stock.

HIGH FARMING WITHOUT MANURE.—Six Lectures on Agriculture, by M. George Ville of Paris. We are greatly obliged to the publishers, Messrs. Williams & Co., Boston, for this admirable little work. It should be read and studied by every agriculturist. Price 25 cents.

## Journalistic.

SUNDAY AFTERNOON.—An interesting and well gotten up paper. For its full commendation we refer the reader to a note from a lady of Baltimore, in reference to it, in our letter box in this number.

VICK'S ILLUSTRATED MONTHLY MAGAZINE for April, was received on the first day of that month. We do not know how to express our admiration of it—it certainly is in better taste, illustrated, typography, neatness and solidity of information than any publication in this country, or in the world.—Long may the old floral patriarch wave !

THE SAVANNAH WEEKLY NEWS, one of the largest and best weeklies in the South announces that it will commence publishing on the 20th of April, a new serial novel—"The Image of Her Mother," by the popular authoress, Ruth Rustic. This will make the News still more attractive.

THE AGE OF TREES.—The longevity of varions trees has been stated to be in round numbers, as follows :

Deciduous Cypress, 6,000 years; boabab tree of Senegal 5,000; dragon's blood tree, 4,000 years; yew, 3,000; cedar of Lebannon, 3,000; olive,2,500; oak, 1,600; orange, 1,560; Oriental palm, 1,200; cabbage palm, 700; lime, 6,00; ash, 4,000; cocoanut palm, 300; date palm, 300; larch, 300; pear, 300; apple, 200 years. The Brazil vine palm arrives at the age of 150 years; the Scotch fir gets its growth in abont 100 years, and the Balm of Gilead in about 50 years.